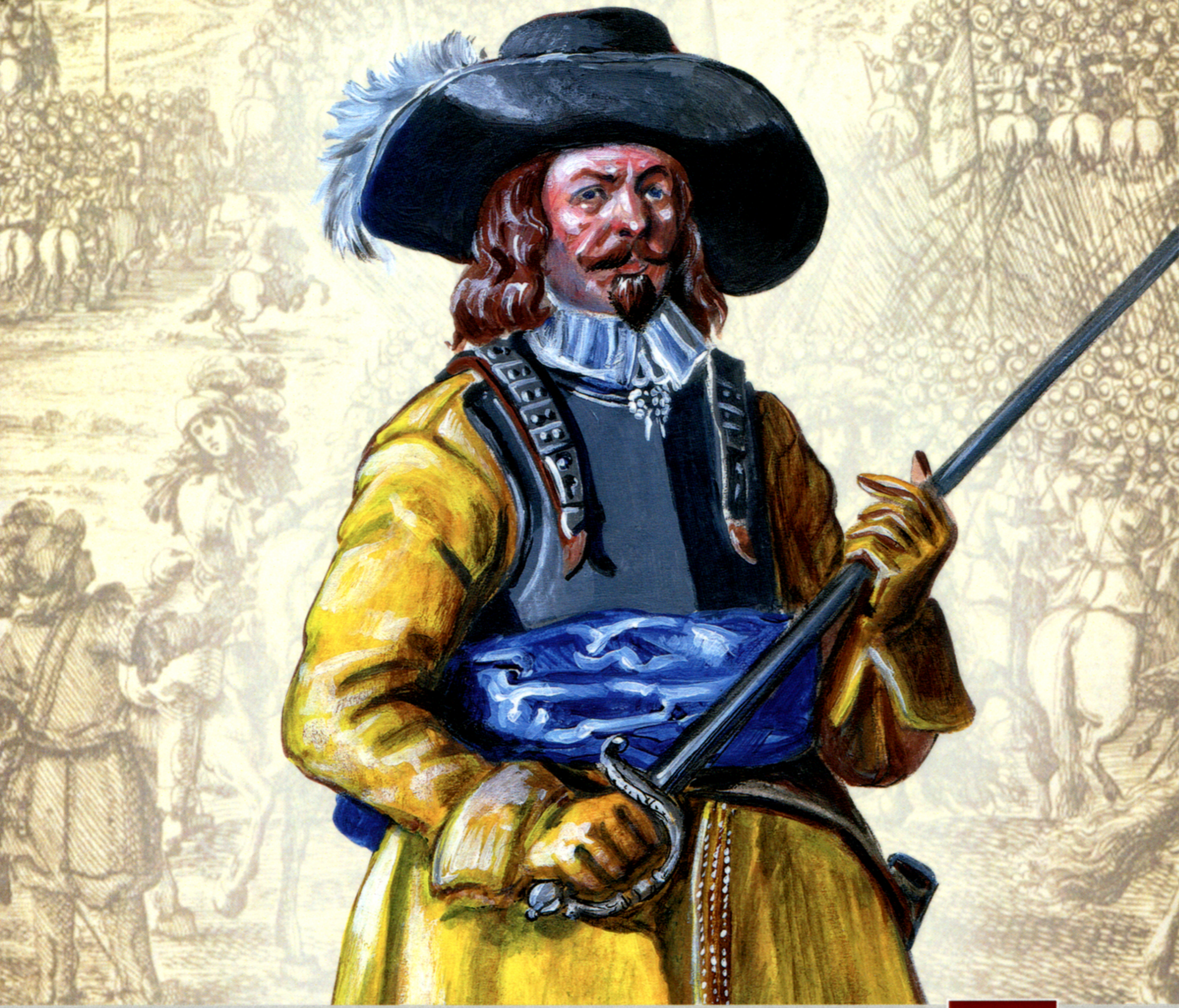


CHARLES X'S WARS

Volume 1 - Armies of the Swedish Deluge, 1655-1660

MICHAEL FREDHOLM VON ESSEN

Century of the Soldier
1618-1721
No.80

The Century of the Soldier series – Warfare c.1618-1721

https://www.helion.co.uk/series/century-of-the-soldier-1618-1721.php

'This is the Century of the Soldier', Fulvio Testi, Poet, 1641

The 'Century of the Soldier' series covers the period of military history c. 1618–1721, the 'golden era' of Pike and Shot warfare. This time frame has been seen by many historians as a period of not only great social change, but of fundamental developments within military matters. This is the period of the 'military revolution', the development of standing armies, the widespread introduction of black powder weapons and a greater professionalism within the culture of military personnel.

The series examines the period in a greater degree of detail than has hitherto been attempted, and has a very wide brief, with the intention of covering all aspects of the period from the battles, campaigns, logistics and tactics, to the personalities, armies, uniforms and equipment.

About the author:

Professor Michael Fredholm von Essen is an historian and former military analyst who has published extensively on the history, defence strategies, security policies, and energy sector developments of Eurasia. He is currently the Head of Research and Development at IRI, an independent research institute. Educated at Uppsala, Stockholm, and Lund Universities, Michael Fredholm von Essen has lectured, including during conferences and as visiting professor, at numerous institutions and universities around the world. He is the author of a large number of books, articles, and academic papers, including *Muscovy's Soldiers: The Emergence of the Russian Army, 1462–1689* (Helion, 2018); *Charles XI's War: The Scanian War between Sweden and Denmark, 1675–1679* (Helion, 2019); *The Lion from the North: The Swedish Army During the Thirty Years War, Volume 1: 1618–1632* (Helion, 2020); *The Lion from the North: The Swedish Army During the Thirty Years War, Volume 2: 1632–1648* (Helion, 2020); *Transnational Organized Crime and Jihadist Terrorism: Russian-Speaking Networks in Western Europe* (Routledge, 2017); *Understanding Lone Actor Terrorism: Past Experience, Future Outlook, and Response Strategies* (Routledge, 2016); *Afghanistan Beyond the Fog of War: Persistent Failure of a Rentier State* (NIAS, 2018); *Eight Banners and Green Flag: The Army of the Manchu Empire and Qing China, 1600–1850* (Pike and Shot Society, 2009); and a large number of articles on early modern warfare in *Arquebusier*, the journal of the Pike and Shot Society.

About the artist:

Sergey Shamenkov graduated from the Academy of Arts in Lviv. He is a sculptor, author and illustrator who specialises in uniformology, military and costume history. His principal area of interest is the study of the Swedish army of Charles XII. When not painting, he is involved in re-enactment, depicting Ukrainian and Swedish units of the 17th and 18th centuries.

CHARLES X'S WARS

Volume 1 – Armies of the Swedish Deluge, 1655–1660

Michael Fredholm von Essen

'This is the Century of the Soldier', Fulvio Testi, Poet, 1641

Helion & Company

Helion & Company Limited
Unit 8 Amherst Business Centre
Budbrooke Road
Warwick
CV34 5WE
England
Tel. 01926 499 619
Email: info@helion.co.uk
Website: www.helion.co.uk
Twitter: @helionbooks
Visit our blog http://blog.helion.co.uk/

Published by Helion & Company 2021
Designed and typeset by Serena Jones
Cover designed by Paul Hewitt, Battlefield Design (www.battlefield-design.co.uk)

Text © Michael Fredholm von Essen 2021
Illustrations open source unless otherwise noted
Colour and pen and ink artwork by Sergey Shamenkov © Helion & Company 2021
Maps drawn by George Anderson © Helion & Company 2021

Illustrations attributed to Army Museum, Stockholm, are reproduced under the Creative Commons license and derive from the website, <https://digitaltmuseum.se>. Illustrations attributed to Royal Armoury, Stockholm, or Skokloster Castle are reproduced under the Creative Commons license and derive from the website, <http://emuseumplus.lsh.se>. Other illustrations are reproduced under GNU Free Documentation License (GNU FDL) coupled with the Creative Commons Attribution Share-Alike License, or derive from the author's personal collection.

Every reasonable effort has been made to trace copyright holders and to obtain their permission for the use of copyright material. The author and publisher apologise for any errors or omissions in this work, and would be grateful if notified of any corrections that should be incorporated in future reprints or editions of this book.

ISBN 978-1-914059-75-9

British Library Cataloguing-in-Publication Data.
A catalogue record for this book is available from the British Library.

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form, or by any means, electronic, mechanical, photocopying, recording or otherwise, without the express written consent of Helion & Company Limited.

For details of other military history titles published by Helion & Company Limited, contact the above address, or visit our website: http://www.helion.co.uk

We always welcome receiving book proposals from prospective authors.

Contents

Introduction iv
Chronology vii
Dramatis Personae xxx
Prologue xxxix

1. The Origins of the Swedish Deluge 53
2. The Swedish Military Establishment 67
3. The Commonwealth Military Establishment 120
4. The Brandenburg-Prussian Military Establishment 165
5. The Muscovite Military Establishment 180
6. The Ukrainian Cossack Military Establishment 216
7. The Transylvanian Military Establishment 228
8. The Imperial Army During the Deluge 236
9. The Crimean Khanate's Military Establishment 242

Colour Plate Commentaries 262
Further Reading 270
Bibliography 274

Introduction

The present book aims to describe and analyse the devastating wars between Sweden, the Polish–Lithuanian Commonwealth, Brandenburg-Prussia, Muscovy, Transylvania, Cossack Ukraine, the Tatar Khanate of the Crimea, Denmark-Norway, the Netherlands, and the Emperor of the Holy Roman Empire during the reign of Swedish King Charles X Gustavus, an experienced general from the Thirty Years' War. By invading the Polish–Lithuanian Commonwealth, King Charles saw an opportunity to put an end to the Polish King's claim to the Swedish throne and to gain additional territories which would enable him to control the customs duties of the Baltic Sea maritime trade. In Poland, the war became known as the 'Swedish deluge' (*potop szwedski*). The first two volumes focus on the first half of the 1655–1660 Swedish–Commonwealth war, which provoked the political and military collapse of the Commonwealth. However, this conflict cannot be disentangled from the simultaneous wars between the Commonwealth and Muscovy, from 1654 to 1667, and between Sweden and Muscovy, from 1656 to 1661, so they will be described as well. The same goes for the simultaneous wars between Denmark and the Netherlands and Sweden from 1657 to 1660, which will be described in the third volume.[1] All these conflicts blended into one, since they took place simultaneously and on the same terrain, which stretched from Arctic Scandinavia to the shore of the Black Sea. The common denominator was the Swedish King Charles, so the book will focus on the Swedish wars. Events which took place farther afield will be covered in somewhat less detail.

Yet, it is only by placing the 1655–1660 Swedish–Commonwealth war in its proper strategic context that we can gain a comprehensive understanding of the events that took place during the conflict. This leads to a number of conclusions which might surprise, especially in light of the considerable number of excellent books which already have been published on the Deluge. For instance, when viewed in this context, the Tatar Khanate of the Crimea emerges as a major player in the conflict and indeed the senior partner in the various alliances that determined the fate of the northern Pontic and indeed the Commonwealth. Furthermore, the analysis reveals that the

---

[1] Michael Fredholm von Essen, *Charles X's Wars*, vol. 3: *The Danish Wars, 1657–1660* (Warwick: Helion, 2022).

Muscovite and Swedish invasions provoked a series of civil wars within the Commonwealth, which by this time was a fragile state characterised by deep fault lines. In Lithuania and Samogitia, notables felt abandoned by the Polish Crown and accordingly swore allegiance to either the Swedish King or the Muscovite Tsar, or both. Soon, the conflict developed into civil wars in which local nobles denounced each other as traitors in order to claim the properties of those who had chosen the other side. In the Ukraine, rival cossack leaders fought each other as much as they fought Poles, Tatars, and Muscovites. In the Polish Crown lands, too, nobles ended up fighting each other, for the same reasons as in Lithuania and Samogitia – in conflicts over property, power, and occasionally religion. Beyond these civil wars, the turmoil resulted in a series of peasant uprisings throughout the entire conflict zone, from the Ukraine in the south to Finland in the north. The uprisings were the result of religious fault lines, but also rivalry between the less well-off peasants and the comparatively more prosperous towns. The strategic context also reveals how Muscovy was far more interested in regaining Smolensk than in capturing the ports of the Baltic Sea. King Charles failed to discern Muscovy's primary strategic objective (following his lead, so did most modern historians), and this mistake was a major reason for Sweden's choice to go to war in the east. Yet another surprise is, perhaps, that the Muscovite army by this time displayed a more 'western', or modern, approach to warfare than the Commonwealth military, despite the Commonwealth's far stronger and more prevalent links to western Europe. Finally, the strategic context explains how the Swedish objectives of the war in the east were satisfied – in Denmark – and why neither Muscovy nor Sweden devoted more than marginal resources to fighting each other.

At the time of the war, some of the belligerent powers followed different calendars. The Gregorian calendar, named after the sixteenth-century Pope Gregory XIII who introduced it, had been developed as a correction to an observed error in the old Julian calendar. The visible result of the correction was that the date was advanced 10 days, that is, 4 October 1582 was followed by 15 October 1582. The Holy Roman Empire changed calendar on this date, as did most Catholic nations. However, many Protestant countries initially objected to adopting a Catholic innovation. The Duchy of Prussia was the first Protestant nation to adopt the Gregorian calendar. However, neither Brandenburg nor Denmark adopted the new calendar until 1700, while Sweden delayed yet longer. Muscovy's successor Russia delayed further still, until 1918. Most of the belligerents in the war accordingly used the Julian calendar, which for this reason differed from the one used in Catholic nations and at present. Old Style (O.S.) and New Style (N.S.) are terms commonly used with dates to indicate that the calendar convention used at the time described is different from that in use at present. Unless noted otherwise, the dates given here will be N.S.

The different calendars caused confusion already in seventeenth-century Europe, and at present the situation frequently causes problems for historians. Swedish archival documents relating to the war commonly use the O.S. calendar, and most Swedish-language works describing the war still follow this style. However, the Swedish field chancellery occasionally used N.S.

dates while in Poland, so it is not always possible to be certain about the style employed in a given document. Meanwhile, Commonwealth documents and modern Polish-language histories naturally follow the N.S. calendar. I have yet to see a work on the Deluge without the occasional wrongly calculated date, and no doubt there will be mistakes in the present volume, too.

As for spelling of seventeenth-century Eastern European names, the linguistic, ethnic, and regional diversity then as well as now does not allow for a single, fully consistent system. State borders, languages, and name-forms have changed, often more than once. Major parts of the region were in the seventeenth century dominated by speakers of non-Slavic languages, including Lithuanian, Tatar, and German. The written forms of, say, modern-day Polish, Belarusian, Ukrainian, and Russian have diverged from one another, and at present some take the choice of one over the other as acceptance of modern-day claims of territory or cultural 'ownership'. No such suggestion is implied in this work. Instead, I have, whenever possible, used the traditional English versions of names (which were commonly based on Russian name-forms), or when it seems appropriate, the German name-forms typically employed in contemporary works of history. For obvious reasons, German geographical names were particularly common in Prussia but also in north-western Poland. Thus, we have Warsaw, not Warszawa; Kiev, not Kyiv; Moscow, not Moskva; Åbo, not Turku; Danzig, not Gdańsk; Posen, not Poznań; Bratslav, not Bracław; Chernigov, not Chernihiv or Czernihów; and the Dnieper, not the Dnipro or Dnyapro.

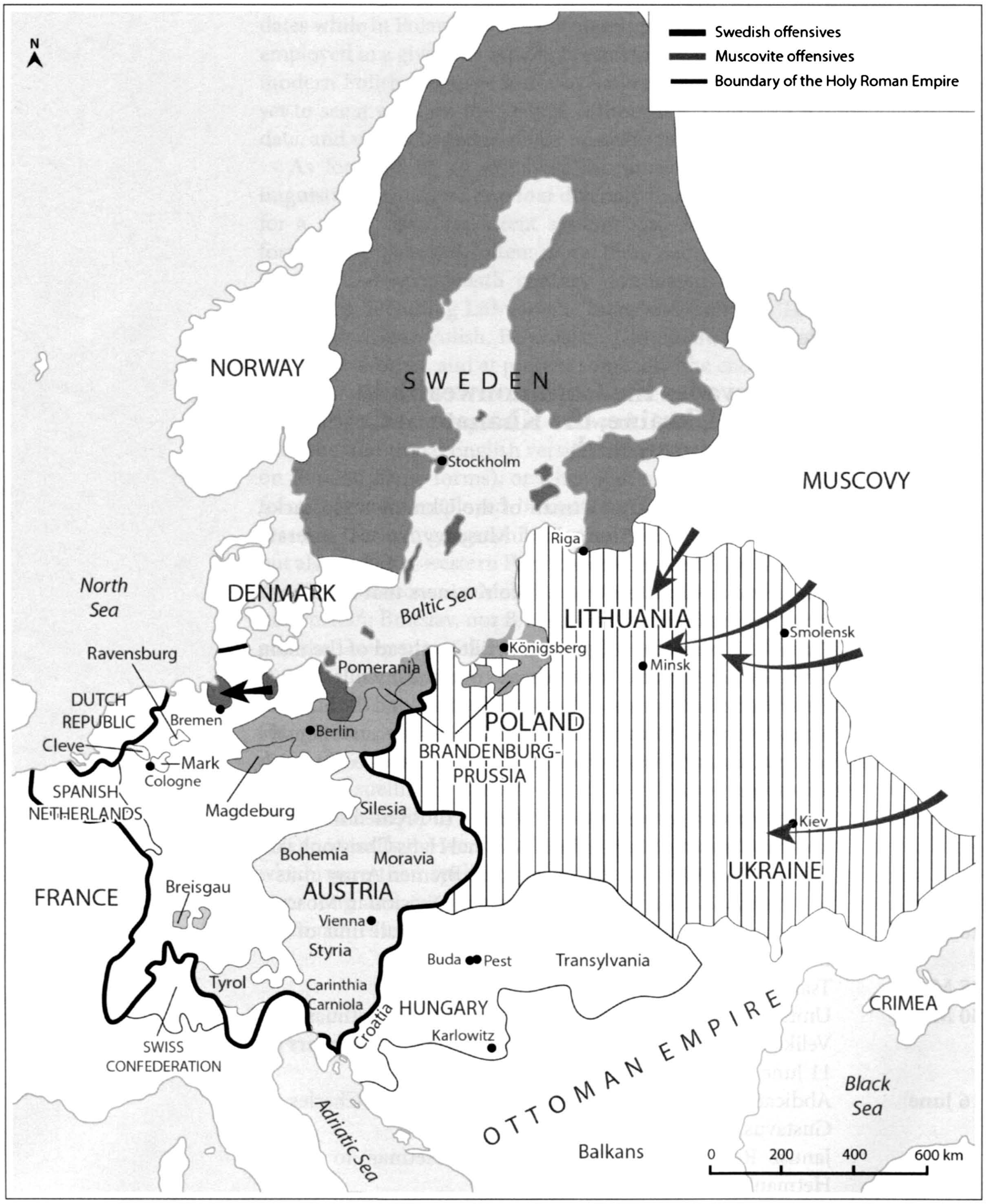
An attempt has been made to include, in addition to English-language translations, the original names in Polish, Lithuanian, Russian, Tatar, Hungarian, Swedish, Finnish, and German, where it seemed important to do so for reasons of clarity. However, since neither language had a codified system of spelling at the time, the forms used are not necessarily those used today. Still, anybody with a working knowledge of the language should be able to identify the word forms employed. The same goes for personal names, which were then spelled in a variety of ways. Moreover, names and titles were long and cumbersome, and we often do not know which of several given names an individual preferred.

Chronology

All dates New Style (N.S.)

1654 – Muscovy Invades the Commonwealth in Support of Cossack Ukraine; the Khanate of Crimea Allies with the Commonwealth

18 January	Bogdan Khmel'nitskiy, Hetman of the Ukrainian Cossacks, acknowledges Tsar Alexis I of Muscovy as his suzerain through the Treaty of Pereyaslav
24 February	Tsar Alexis informs his immediate retainers that he intends to invade the Commonwealth
9 March	Tsar Alexis sends his heavy siege artillery ahead of the main army's expected march route to save time; meanwhile, Crown Field Hetman Stanisław 'Rewera' Potocki and Lithuanian Field Hetman Janusz Radziwiłł each initiate an offensive against Cossack Ukraine; neither comes close to reaching his objectives
12 April	Facing increasing tensions with the city of Bremen in north-western Germany, Swedish Field Marshal Hans Christoph von Königsmarck takes Burg, garrisoned by Bremen Army units
11 May	Mobilisation of Tsar Alexis's Sovereign's Division in Moscow
18 May	Königsmarck takes Bederkesa, held by a small unit of the Bremen Army
25 May	Tsar Alexis's field army sets out from Moscow
30 May	Units from Muscovy's Novgorod Army enter Lithuania at Velikiye Luki, advancing against Nevel', which surrenders on 11 June
16 June	Abdication of Queen Christina of Sweden; Charles X Gustavus crowned King of Sweden
17 June	Janusz Radziwiłł elevated from Field Hetman to Grand Hetman of Lithuania
24 June	City of Bremen initiates open war against Sweden as units of the Bremen Army conquers the Swedish-held bastion at Burg, and then plunders Swedish villages in the territory
27 June	Novgorod Army under Prince Vasiliy P. Sheremetyev takes Polotsk
29 June	Andrey Buturlin's Muscovite corps from Ryl'sk reaches Kiev

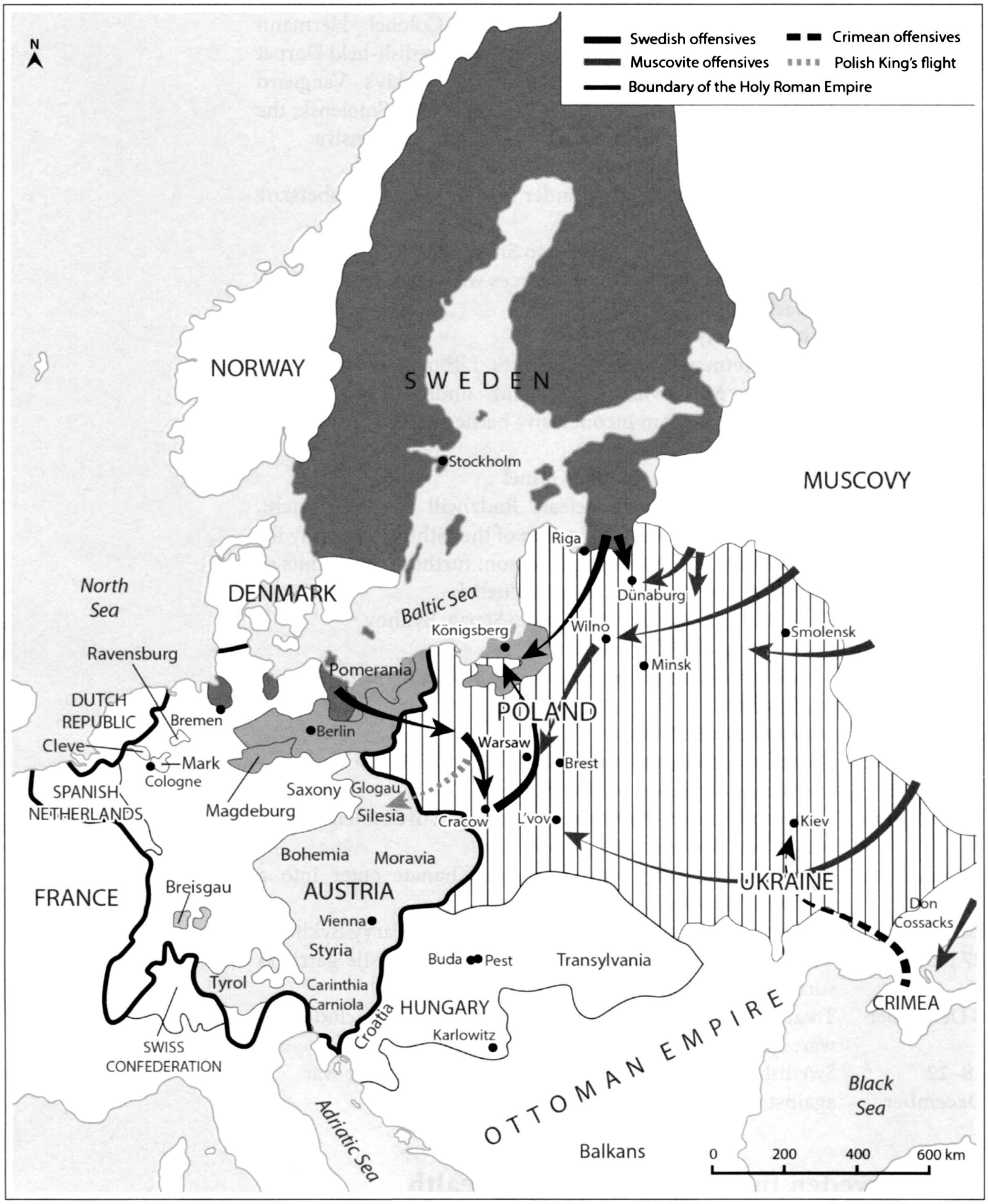

Swedish offensives
Muscovite offensives
Boundary of the Holy Roman Empire
N
NORWAY
SWEDEN
Stockholm
MUSCOVY
Riga
North Sea
DENMARK
Baltic Sea
LITHUANIA
Smolensk
Königsberg
Minsk
Ravensburg
Pomerania
DUTCH REPUBLIC
Bremen
Berlin
POLAND
Cleve
Mark
Cologne
BRANDENBURG-PRUSSIA
SPANISH NETHERLANDS
Magdeburg
Silesia
Kiev
Bohemia
Moravia
UKRAINE
FRANCE
Breisgau
AUSTRIA
Vienna
Styria
Buda
Pest
Transylvania
Tyrol
Carinthia
Carniola
HUNGARY
CRIMEA
Croatia
Karlowitz
SWISS CONFEDERATION
OTTOMAN EMPIRE
Black Sea
Adriatic Sea
Balkans
0
200
400
600 km

Military Operations 1654

4–5 July	Lithuanian units under Lieutenant Colonel Hermann Ganskopf and his cavalry company from Swedish-held Dorpat successfully attack Prince Nikita Odoyevskiy's Vanguard Division at night at the stream Kolodnya near Smolensk; the raid is a success but fails to stop the Muscovite offensive
6 July	Odoyevskiy's Vanguard Division reaches Smolensk
7 July	Muscovy's Bryansk Army under Prince Aleksey Trubetskoy takes Roslavl'
8 July	Tsar Alexis arrives to lay siege to Smolensk
21 July	Andrey Buturlin's corps joins forces with Ivan Zolotarenko's cossack army at Fastov
22 July	Bryansk Army takes Mstislavl'
12 August	Grand Hetman Janusz Radziwiłł's Lithuanian Army and a strong Muscovite detachment under Prince Yakov Cherkasskiy fight an inconclusive battle at Shklov
20 August	Muscovites take Orsha
23 August	Zolotarenko's cossacks take Gomel'
24 August	Cherkasskiy decisively defeats Radziwiłł at Shepelevichi, which signifies the neutralisation of the Lithuanian Army for the duration of the campaign season; further north, units of the Novgorod Army lay siege to Vitebsk
29 August	Zolotarenko's cossacks lay siege to Staryy Bykhov
13 September	Muscovites take Mogilyov
15 September	Swedish Field Marshal Hans Christoph von Königsmarck retakes Burg
21 September	Muscovites take Shklov
25 September	Ceasefire agreement between Sweden and Bremen
3 October	Smolensk surrenders to Tsar Alexis
22 October	Cherkasskiy takes Dubrovna, 100 km west of Smolensk, after which Tsar Alexis returns to Moscow
22 November	The Commonwealth and Crimean Khanate enter into a military alliance
26 November	Zolotarenko's cossacks abandon the siege of Staryy Bykhov
27 November	Vitebsk surrenders to Novgorod Army; the castle garrison surrenders on 2 Dec.
8 December	Treaty of Stade between Bremen and Sweden concludes the war; Bremen pledges allegiance to Sweden
18–22 December	Swedish Council of the Realm agrees to prepare for war against the Commonwealth

1655 – Sweden Invades the Commonwealth

13 January	Vasiliy B. Sheremetyev's Belgorod Division and Fyodor Buturlin's Karpov corps join forces with Andrey Buturlin's corps in the Ukraine at Belotserkov'
29 January–1 February	Qalgha Sultan Ghazi Geray and Crown Grand Hetman Stanisław Potocki win an inconclusive victory at Akhmatov


N
Swedish offensives
Crimean offensives
Muscovite offensives
Polish King's flight
Boundary of the Holy Roman Empire
NORWAY
SWEDEN
Stockholm
MUSCOVY
Riga
Dünaburg
North Sea
DENMARK
Baltic Sea
Königsberg
Wilno
Smolensk
Minsk
Ravensburg
Pomerania
DUTCH REPUBLIC
Bremen
POLAND
Berlin
Warsaw
Brest
Cleve
Mark
Cologne
SPANISH NETHERLANDS
Saxony
Glogau
Magdeburg
Silesia
Cracow
L'vov
Kiev
Bohemia
Moravia
FRANCE
Breisgau
AUSTRIA
UKRAINE
Don Cossacks
Vienna
Styria
Buda
Pest
Transylvania
Tyrol
Carinthia
Carniola
HUNGARY
Croatia
CRIMEA
SWISS CONFEDERATION
Karlowitz
OTTOMAN EMPIRE
Black Sea
Adriatic Sea
Balkans
0
200
400
600 km

Military Operations 1655

	in the Ukraine over Sheremetyev's and Khmel'nitskiy's Muscovites and Ukrainian cossacks
11 February	Swedish officers called up for duty
12 February	Lithuanian Hetmans Janusz Radziwiłł and Wincenty Gosiewski lay siege to Mogilyov, defended by Ivan Alfer'yev
18 March	All Swedish colonels ordered to be ready to march from 11 May onwards
26 March	Sheremetyev and Fyodor Buturlin recalled from the Ukraine to Moscow
9 April	Having received intelligence that Muscovite units are assembling at Velikiye Luki near the border with Lithuania, King Charles orders Field Marshal Gustav Horn in Livonia to take Dünaburg before the Muscovites do so; if possible, Horn should also take Courland and Samogitia before the Muscovites move in
14 April	Swedish mobilisation orders issued, with details on which units to be shipped overseas for the campaign
11 May	Commonwealth forces abandon the siege of Mogilyov
26 May	Swedish Crown calls up 16 large merchantmen to move artillery and heavy supplies; at around this time, Pskov Army, under Afanasiy Ordin-Nashchokin, unsuccessfully lays siege to Dünaburg
5 June	Swedish Crown purchases a large number of cavalry horses in northern Germany
29 June	Swedish army in Livonia under Gustav Adolph Lewenhaupt sets out bound for Dünaburg to pre-empt Muscovite occupation
2 July	In accordance with Imperial regulations, Field Marshal Arvid Wittenberg formally requests permission from Frederick William to march through Brandenburg on the way to Poland
4 July	Tsar Alexis crosses the Berezina at Borisov with the Muscovite main army, advancing towards Minsk
6 July	Frederick William grants Wittenberg permission to march through his territory; he also informs King John Casimir, the Duke of Courland, the Elector of Saxony, and the Emperor
10 July	Lewenhaupt arrives at Dünaburg; Lithuanian Colonel Samuel Komorowski burns the town and abandons it without resistance, leaving the commandant, Teofil Bolt, to defend Dünaburg Castle
11 July	Bolt surrenders Dünaburg Castle; in the Ukraine, Prince Grigoriy Romodanovskiy, Vasiliy and Andrey Buturlin, and Bogdan Khmel'nitskiy set out from Belotserkov'
13 July	Wittenberg gathers the Swedish army at Stettin, Pomerania; in eastern Lithuania, Muscovites and Ukrainian cossacks, under Tsar Alexis and Ivan Zolotarenko, take Minsk
14 July	Having crossed the Oder, Wittenberg musters his army at Damm, Pomerania
15 July	Wittenberg sets out from Damm, enters Brandenburg's Eastern Pomerania on the way to Poland

19 July	King Charles embarks the army at Dalarö in the southern Stockholm archipelago
21 July	Wittenberg crosses the border into Poland at Falkenburg; King John Casimir calls up the Greater Poland Levy of the Nobility
23 July	Magnus Gabriel De la Gardie arrives in Riga, where he assumes overall command of Livonia and the other eastern territories from Gustav Horn
24 July	Wittenberg defeats the Greater Poland Levy of the Nobility, under Krzysztof Opaliński and Andrzej Karol Grudziński, at Usch; King Charles's fleet reaches Peenemünde on Rügen, Pomerania
25 July	Greater Poland Levy of the Nobility, under Opaliński, surrenders to Wittenberg at Usch and swears fealty to Sweden; King Charles disembarks the army at Wolgast, Pomerania
27 July	Brandenburg and the Netherlands conclude a defensive alliance treaty, with the Netherlands promising to assist in the defence of Ducal Prussia as a means to preserve trade interests in the Baltic Sea
29 July	Wittenberg reaches Posen
30 July	Posen surrenders to Wittenberg, who enters the following day
August	Don cossack mariners in Muscovite service raid several Crimean ports, compelling the Crimean Tatars to remain on the defensive instead of intervening in the Ukraine
5 August	Swedes under Lieutenant General Jacob Casimir De la Gardie move into Pilten, a Courland bishopric under the Polish Crown
7 August	Tsar Alexis defeats Grand Hetman Janusz Radziwiłł's Lithuanians at Wilno, the capital of the Grand Duchy of Lithuania; Swedish artillery under national chief of artillery Gustav Otto Stenbock moves out of Damm ahead of King Charles's army
8 August	Muscovites under Tsar Alexis take and sack Wilno
9 August	Tsar Alexis moves into Wilno; based on this conquest, he assumes the title Grand Duke of Lithuania
10 August	King Charles and his army leave Damm to join forces with Wittenberg
14 August	Magnus Gabriel De la Gardie musters the Livonian army at Kokenhusen
16 August	Having marched straight to Czarnikow, King Charles crosses the River Netze; Muscovites take Kowno
17 August	Feeling betrayed by the Polish failure to support Lithuania against Muscovy and the Polish surrender at Usch, the Lithuanian Estates under Grand Hetman Radziwiłł surrender to Sweden (the Declaration of Kėdainiai), and accept Swedish protection and King Charles as the new Grand Duke of Lithuania (as a result, the Duchy henceforth has three claimants to the title); King John Casimir abandons Warsaw

20 August	Moving into Samogitia from Pilten, Lieutenant Colonel Martin Schultz aims to occupy Polangen but loses his way and instead takes Heiligen Aa
24 August	King Charles and Wittenberg join forces at Konin
30 August	Having received intelligence that King John Casimir stands at Łowicz, King Charles marches east to meet him
31 August	Stenbock joins forces with King Charles and Wittenberg at Koło
2 September	Swedes defeat King John Casimir in a minor engagement at Sobotą; part of the Lithuanian Army disavows its loyalty to Janusz Radziwiłł and the agreement with Sweden through the Confederation of Virbalis
3 September	Swedes defeat King John Casimir in a minor engagement at Piątek
4 September	King Charles takes Łowicz; Swedish fleet under Field Marshal and Admiral Carl Gustav Wrangel begins a blockade of Danzig; Captain Johan von Ulenbrock with a company of Swedish dragoons from Dünaburg take Braslau to gain control of the Düna and shield Samogitia and Courland from Muscovite attacks
6 September	King Charles orders Wittenberg towards Cracow with the main army; the King also writes to De la Gardie, rebuking him for not pre-empting the Muscovites through an offensive towards Poland; the letter, followed by many others, orders De la Gardie to move the Livonian army to Prussia
8 September	Abandoned by King John Casimir, the Commonwealth capital Warsaw surrenders to King Charles without resistance; on the Royal Prussian shore, Wrangel takes Hela, after which he attempts but fails to take Putzig
9 September	Stefan Czarniecki successfully attacks Wittenberg's rearguard at Inowłódz
11 September	King Charles leaves Warsaw, advances towards Cracow
12 September	Prince Aleksey Trubetskoy, soon supported by Ukrainian cossacks under Zolotarenko, lays siege to Slutsk; Wittenberg lays siege to Opoczno
14 September	King Charles joins forces with Wittenberg at Opoczno
15 September	King John Casimir and the Crown Army reaches Żarnów, intending to make a stand against the Swedes
16 September	King Charles defeats King John Casimir and the Crown Army at Żarnów
19 September	The fleeing King John Casimir reaches Cracow
20 September	In the Treaty of Poswol, Duke Jacob Kettler of Courland abandons his neutrality, permitting the Swedish army to march through his territory, in exchange for the hope that King Charles might recognise his neutrality later
21 September	Stenbock leaves Warsaw, bound for Masovia
24 September	Swedes encounter part of the Polish army north of Cracow; Poles burn their camp and retreat

25 September	King John Casimir abandons Cracow; Jerzy Sebastian Lubomirski departs to his estate in Lubowla with the crown jewels and royal archive to safeguard them; the Swedish army immediately contains Cracow; in the Ukraine, Romodanovskiy's Muscovites and Khmel'nitskiy's cossacks lay siege to L'vov
27 September	King Charles's order to De la Gardie to march to Prussia reaches the latter; on the following day De la Gardie responds that conditions do not yet allow for this
28 September	Swedes lay siege to Cracow; at Nowy Dwór north-west of Warsaw, Stenbock urges the noble levy of Masovia, under Jan Kazimierz Krasiński, to surrender
29 September	Swedes under Robert Douglas take Landskron without a fight; King Charles issues a letter of protection to the Jews of Kazimierz outside Cracow
30 September	Romodanovskiy's combined Muscovite–cossack army defeats Crown Grand Hetman Stanisław Potocki at Gorodok, which signifies the neutralisation of the Crown Army in Galicia; Potocki retreats towards the west; at Nowy Dwór, Stenbock defeats the Levy of the Nobility of Masovia, under Krasiński
1 October	King Charles takes Wiśnicz, one of Lubomirski's strongpoints, without a fight
2 October	Douglas rejoins King Charles at Wiśnicz
3 October	King Charles defeats Crown Field Hetman Stanisław Lanckoroński at Wojnicz
4 October	Polish irregulars under Krzysztof Żegocki surprise the small Swedish garrison at Kosten, inflicting a mortal wound on Major General Frederick of Hesse-Eschwege, King Charles's brother-in-law
6 October	When out reconnoitring the city walls of Cracow, King Charles's horse is shot under him
7 October	King John Casimir crosses the border into the Empire, where he goes into exile
10 October	Trubetskoy and Zolotarenko abandon the siege of Slutsk and return towards Mogilyov; Swedes under Major General Johann Weyckhardt von Wrzesowitz und Neuschloss burn Kosten in retaliation for the death of Frederick of Hesse-Eschwege and his men
12 October	Stefan Czarniecki initiates negotiations for the surrender of Cracow
17 October	Having abandoned the Commonwealth, King John Casimir finds refuge in Oberglogau, Silesia; Czarniecki surrenders Cracow to King Charles in return for free departure
19 October	Czarniecki leaves Cracow; King Charles appoints Paul Würtz commandant of the city
20 October	Lithuanian Grand Hetman Janusz Radziwiłł and the Lithuanian nobility, in total more than 1,100 notables, sign a second treaty with Sweden, the Union of Kėdainiai, recognising King Charles as Grand Duke of Lithuania and

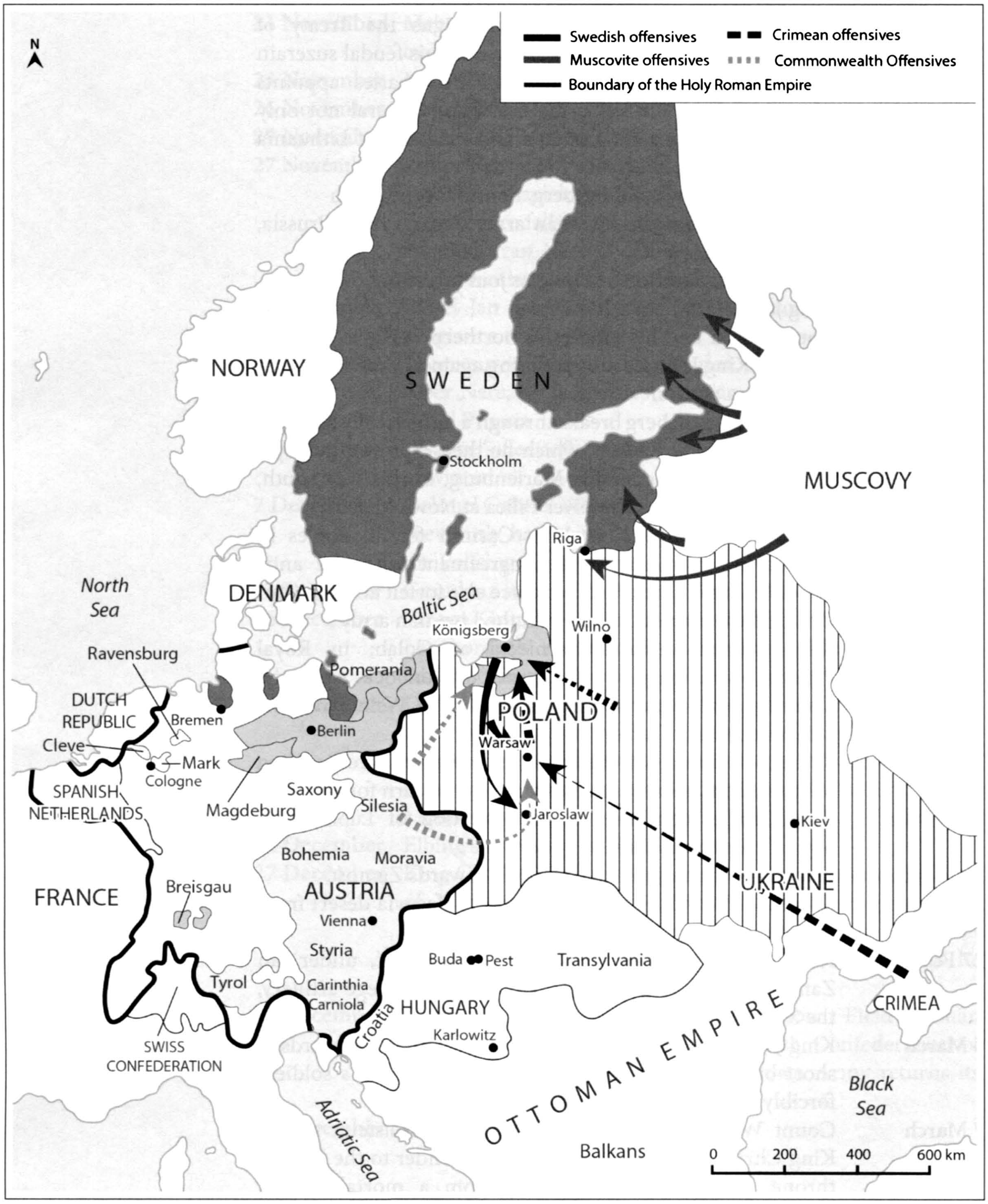
	proclaiming a state union between Lithuania and Sweden
25 October	Pyotr Potyomkin takes Lublin
26 October	Crown Army under Aleksander Koniecpolski surrenders near Cracow, swears allegiance to King Charles
29 October	Following the Union of Kėdainiai, De la Gardie finally sets out with the Swedish Livonian army en route to Prussia
30 October	King Charles sets out from Cracow, bound for Warsaw
2 November	Princes Semyon Urusov's and Yuriy Baryatinskiy's Novgorod Army sets out from Kowno, moving south towards Brest
4 November	Already defeated in the south by Romodanovskiy's Muscovites and with King Charles's victorious Swedes approaching from the north, Crown Grand Hetman Potocki commences negotiations for his surrender to King Charles
6 November	Romodanovskiy and Khmel'nitskiy learn that Mehmed Khan leads a Crimean army against them in an effort to relieve L'vov
7 November	Romodanovskiy and Khmel'nitskiy abandon the siege of L'vov in return for a substantial monetary contribution from its burghers; further to the west, Crown Grand Hetman Potocki agrees to swear allegiance to Sweden
8 November	Having proclaimed himself Grand Duke of Lithuania, Tsar Alexis orders the compilation of an Oath Book of those Lithuanian nobles who swear allegiance; more than 2,000 swear fealty to Tsar Alexis, which means that Lithuania, although unanimous in repudiating King John Casimir, is divided between King Charles and Tsar Alexis as Grand Duke; further to the west, a Swedish cavalry unit under Johann Weyckhardt von Wrzesowitz und Neuschloss reaches the fortified monastery of Jasna Góra near Częstochowa
12 November	Frederick William of Brandenburg and the nobility of Royal Prussia sign the Treaty of Rheinsberg, in which the latter request Brandenburg garrisons in Royal Prussia; Danzig, Thorn, and Elbing choose not to participate, since they prefer to trust to their own means
13 November	Crown Grand Hetman Potocki and Crown Field Hetman Lanckoroński, commanders of the remaining Commonwealth forces, swear allegiance to Sweden at Sandomierz
16 November	King Charles reaches Warsaw, where representatives of several provinces swear allegiance to Sweden
18 November	Following fruitless negotiations, Swedes under Burchard Müller von der Lühne lay siege to the fortified monastery of Jasna Góra; meanwhile, King John Casimir's Royal Guard surrenders at nearby Bautz; Mehmed Khan attacks Romodanovskiy's wagon fort near Zalozhitsy, but is repulsed
19 November	King Charles sets out from Warsaw towards Prussia
20 November	King John Casimir issues a manifesto at Oppeln, calling all Commonwealth citizens to arms against the Swedes in preparation for his return; Mehmed Khan attacks Vasiliy Buturlin's corps as it crosses the river at Ozyornoye

21 November	Mehmed Khan offers Khmel'nitskiy safe passage if he hands over the Muscovites, but Khmel'nitskiy refuses
23 November	Mehmed Khan agrees to an armistice
26 November	King Charles lays siege to Thorn
29 November	Strasburg surrenders to King Charles
27 November	Prince Semyon Urusov's Novgorod Army decisively defeats Paweł Jan Sapieha's Lithuanians at Verkhovichi near Brest; Zolotarenko falls at the siege of Staryy Bykhov; Khmel'nitskiy appoints Ivan Nechay acting cossack overall commander in the Ruthenian part of Lithuania
30 November	Paweł Jan Sapieha accepts Swedish protection and swears allegiance to King Charles
2 December	Thorn surrenders to King Charles; arriving at Różan on the River Nare, De la Gardie's Livonian army turns west towards Royal Prussia
5 December	Wrangel's fleet off Danzig returns to Sweden in anticipation of winter
7 December	Colonel Gabriel Wojniłłowicz leads a revolt in Krosno, which previously had sworn allegiance to King Charles, defeating the Polish garrison there
13 December	Graudenz surrenders to King Charles
16 December	Crown Grand Hetman Potocki and Crown Field Hetman Lanckoroński renounce their loyalty to King Charles and advocate an uprising
18 December	De la Gardie's Livonian army joins forces with King Charles at Elbing; King John Casimir departs Oberglogau, Silesia, moving south-eastwards (on the Imperial side) along the Imperial-Commonwealth border through the Carpathian Mountains
22 December	Elbing surrenders to King Charles
27 December	King Charles reaches Königsberg, advises Frederick William of Brandenburg to join him; Swedes abandon the siege of Jasna Góra; King John Casimir crosses into Poland at Lubomirski's estate Lubowla; retrieving the crown jewels, he continues towards L'vov
29 December	Crown Grand Hetman Potocki and Crown Field Hetman Lanckoroński establish the anti-Swedish Confederation of Tyszowce, in which much of the Crown Army returns its loyalty to King John Casimir.
31 December	Janusz Radziwiłł dies

1656 – Brandenburg Allies with Sweden; Muscovy Invades Sweden

13 January	King Charles appoints Duke Adolph John *Generalissimus* over the Swedish armies in the Commonwealth, making him the commander-in-chief in the King's absence

17 January	Frederick William of Brandenburg signs the Treaty of Königsberg, recognising King Charles as his feudal suzerain in Ducal Prussia and Ermland; King Charles appoints Magnus Gabriel De la Gardie Governor-General not only of Livonia but also of Samogitia and the parts of Lithuania which has sworn allegiance to Sweden
27 January	King Charles leaves Königsberg, bound for the south
30 January	De la Gardie and the Livonian army departs from Prussia, bound for Riga
7 February	King Charles and Robert Douglas join forces at Łowicz
10 February	King John Casimir reaches L'vov
11 February	Koniecpolski and his officers in northern Masovia write in secret to King John Casimir, offering again to change sides in return for a pardon
12 February	Rutger von Ascheberg breaks through a numerically stronger Polish force near Radom, which he then captures; in Royal Prussia, Stenbock contains Marienburg; on his way south, King Charles crosses the River Pilica at Nowe Miasto
14 February	Deadline issued by King John Casimir for all nobles in Sandomierz province to sign agreement with the anti-Swedish Confederation of Tyszowce else forfeit all property
17 February	De la Gardie arrives in Riga with the Livonian army
18 February	King Charles defeats Czarniecki at Gołąb; in Royal Prussia, Marienburg opens its gates to Stenbock, while the Commonwealth garrison under Jacob von Weiher retreats into Marienburg Castle
19 February	Koniecpolski and his officers again write in secret to King John Casimir, offering to change sides in return for a pardon
20 February	King Charles continues in the direction of Lublin, and beyond this town, L'vov
23 February	King Charles continues from Lublin towards Zamość
24 February	Koniecpolski and his men in northern Masovia desert from Swedish service
27 February	King Charles reaches the fortress of Zamość, under Jan Zamoyski, who refuses to surrender; lacking siege artillery, the Swedes are unable to lay siege
6 March	King John Casimir musters his army at L'vov; afterwards, a short but sharp mutiny breaks out as Czarniecki's soldiers forcibly attempt to make their way into the city
7 March	Count Waldemar Christian of Schleswig-Holstein, son of King Christian IV of Denmark and pretender to the Danish throne, dies in Swedish service from a mortal wound sustained at Gołąb
9 March	King Charles reaches Jarosław, which surrenders
15 March	Czarniecki successfully raids several Swedish outposts at Jarosław
16 March	Marienburg Castle surrenders to Stenbock; Weiher and his men withdraw to Putzig


Swedish offensives
Crimean offensives
Muscovite offensives
Commonwealth Offensives
Boundary of the Holy Roman Empire
N
NORWAY
SWEDEN
Stockholm
MUSCOVY
Riga
North Sea
DENMARK
Baltic Sea
Königsberg
Wilno
Ravensburg
Pomerania
DUTCH REPUBLIC
Bremen
POLAND
Berlin
Cleve
Mark
Warsaw
Cologne
SPANISH NETHERLANDS
Saxony
Silesia
Magdeburg
Jaroslaw
Kiev
Bohemia
Moravia
FRANCE
Breisgau
AUSTRIA
UKRAINE
Vienna
Styria
Buda
Pest
Transylvania
Tyrol
Carinthia
Carniola
Croatia
HUNGARY
CRIMEA
SWISS CONFEDERATION
Karlowitz
OTTOMAN EMPIRE
Black Sea
Adriatic Sea
Balkans
0
200
400
600 km

Military Operations 1656

18 March	Swedes under Johann Weyckhardt von Wrzesowitz und Neuschloss take Bielitz
22 March	Abandoning southern Poland, King Charles and the field army depart from Jarosław
25 March	Major Christer Carlsson reaches Sandomierz by the River San; he begins to build a bridge ahead of the field army's arrival but is pre-empted by the arrival of Jerzy Sebastian Lubomirski's army
26 March	King Charles orders Duke Adolph John to send reinforcements to Sandomierz; he also orders the Duke to send Field Marshal Carl Gustav Wrangel and Philip Florinus of Sulzbach with a corps to Lublin to pacify this area
27 March	Duke Adolph John orders the King's and his brother-in-law, Margrave Frederick of Baden-Durlach, to Sandomierz; the Margrave's corps sets out
28 March	Czarniecki attempts a raid on King Charles's camp at Nisko, but is repulsed with serious losses; nonetheless, on the following day Jan Fryderyk Sapieha and most Commonwealth soldiers desert the Swedish King
30 March	King Charles finds himself trapped at Gorzyce between Rivers Vistula and San
1 April	As a means to raise the Catholic peasantry against the heretic invaders, King John Casimir in a lavish ceremony in L'vov (the L'vov Oath) entrusts the Commonwealth under the Virgin Mary's protection, whom he announces as the 'Queen of the Polish Crown and other of his countries'; further to the west, Jerzy Sebastian Lubomirski lays siege to Sandomierz, held by a small Swedish garrison
2 April	King Charles evacuates the garrison at Sandomierz across the Vistula
3 April	Stefan Czarniecki joins Lubomirski at Sandomierz
3–4 April	King Charles's field army crosses River San at night, defeats Grand Hetman Paweł Jan Sapieha's Lithuanians
4 April	Margrave Frederick of Baden-Durlach's Swedish corps receives orders to return to Warsaw; he turns back towards the north on the western side of the Vistula
5 April	King Charles's artillery and supply train with 600 musketeers embark on river barges to accompany his army along the eastern bank of the Vistula towards Warsaw
6–7 April	Polish armies under Stefan Czarniecki and Jerzy Sebastian Lubomirski defeat the rearguard of Margrave Frederick of Baden-Durlach's Swedish corps (on 6th) and disperses the rest at Warka (on 7th)
8 April	Remaining Swedish infantry embarks on barges to accompany King Charles to Warsaw
12 April	Some of Lubomirski's and Czarniecki's units attempt to take Łowicz, but without success
15 April	King Charles's field army moves into Warsaw

17 April	King Charles's field army leaves Warsaw, bound for Prussia; further on along the road to Prussia, Lubomirski's and Czarniecki's units defile past Thorn
18–21 April	Anti-Swedish uprising breaks out in Samogitia; over time, the uprising develops into a Samogitian civil war over landed properties
20 April	Grand Hetman Sapieha's Lithuanian Army moves in to blockade Warsaw
24 April	Sapieha initiates a siege of Warsaw, defended by Wittenberg with a small garrison
29 April	Duke Adolph John assumes command of the Swedish field army, assisted by Field Marshal Carl Gustav Wrangel, while King Charles continues to Thorn
7 May	Duke Adolph John and Wrangel defeat Lubomirski and Czarniecki at Kłecko, north of Gniezno
8 May	King Charles joins recently arrived Queen Hedwig Eleonora at Elbing
10 May	Stenbock repulses major sortie from Danzig towards Dirschau
17–18 May	Wittenberg repulses major attempt to storm Warsaw
17 May	Muscovy declares war on Sweden; King Charles leaves command of the offensive against Danzig to Stenbock, rides to Marienburg
22 May	Stenbock moves to Dirschau, where King Charles rejoins him
25 May	Danzig Army abandons forward bastions
28 May	Swedish naval squadron under Daniel Jönsson Strussflycht blockades Danzig from the sea
29 May	Stenbock lays siege to Danzig
30 May	King John Casimir arrives to assume command of the siege of Warsaw; Muscovite reinforcements under Boris Chelishchev arrive in Olonets on Lake Ladoga in preparation for the invasion of Kexholm County
1 June	King Charles defeats Czarniecki at Exin, which halts the Polish raid into Royal Prussia
9 June	Thwarted elsewhere, both Lubomirski and Czarniecki join King John Casimir outside Warsaw with their armies, significantly increasing the strength of the besiegers
11 June	Date originally planned for Muscovy's invasion of Ingria and Kexholm County (later revised and postponed until 1 July)
12 June	Chelishchev sends his son Mikhail to capture the Swedish border post at Salmis on the eastern shore of Lake Ladoga, an action which alerts the Swedes at Kexholm that war has begun
13 June	Muscovites under Pyotr Potyomkin cross the border into Ingria; In Poland, Duke Adolph John and Wrangel take positions at Nowy Dwór, on the Vistula north-west of Warsaw
14 June	Potyomkin lays siege to Nöteborg

15 June	Potyomkin's Muscovites occupy the largely abandoned Nyen
16 June	Before news about the Muscovite attack reaches him, King Charles orders the Council of the Realm in Stockholm to send a fleet into the Gulf of Finland to protect against Muscovite naval attacks; Muscovite raiders cross the border into Livonia at Rappin
24 June	The Council of the Realm in Stockholm orders supplies to be shipped to Finland in anticipation of a Muscovite attack
25 June	King Charles and Frederick William of Brandenburg conclude the Treaty of Marienburg, which stipulates that Frederick William will aid Sweden with all his forces in return for hereditary sovereignty over four provinces in Greater Poland; Frederick William to remain a Swedish vassal in Ducal Prussia
26–29 June	The Council of the Realm in Stockholm orders the provisioning of a relief squadron to Finland under Vice-Admiral Gustav Wrangel
27 June	Polish siege artillery finally arrives at Warsaw, deploys, and enters into action
28 June	Potyomkin deploys the artillery captured at Nyen against Nöteborg; some 100 Viborg cavalry and dragoons under Berendt Gröön and Reinhold Johan von Hagen retake and burn Taipale between Kexholm and Nöteborg
29–30 June	At night, Commonwealth army undertakes a major assault on Warsaw, penetrating its outer defensive line
30 June	Treaty of Riga between Courland and Sweden, according to which King Charles pawns Pilten to Courland for 10 years in exchange for a monetary payment and for the time being recognises Courland's neutrality; Pilten is handed over within days
1 July	Wittenberg surrenders Warsaw in exchange for free departure; threatened by his own men, King John Casimir breaks the agreement, detaining Wittenberg and the senior Swedish commanders
6–7 July	Swedish detachment on its way from Narva to Kaporie fights off a surprise night attack by Muscovite units; afterwards, Swedes return to Narva
8 July	Vice-Admiral Wrangel's squadron sets out from Stockholm, bound for the Gulf of Finland
9 July	Potyomkin bypasses Nöteborg by dragging river vessels overland; despite his limited manpower Potyomkin now dominates the Karelian Isthmus, eastern Ingria, and the eastern shore of the Gulf of Finland
13 July	Muscovites under Pyotr Pushkin lay siege to Kexholm; Swedes under Prince Bogusław Radziwiłł successfully relieve Tykocin
14 July	Tsar Alexis joins his main field army at Polotsk
16 July	Swedish relief force under Christopher Burmeister sets out from Viborg en route to Kexholm

17 July	Swedish garrison from Pilten returns by ship to Ösel, Livonia; Viborg Cavalry Regiment under Erik Kruse arrives in Finland, the first Finnish unit redeployed because of the Muscovite invasion
18 July	Another Muscovite raid into Livonia, again crossing the border at Rappin; in retaliation, Major General Heinrich Streiff von Lauenstein crosses the border and attacks the Muscovite camp at Pechory
19 July	Swedish naval squadron under Vice-Admiral Gustav Wrangel reaches Helsingfors, Finland
24 July	Burmeister defeats Sila Potyomkin at Rautus on the Karelian Isthmus; after the battle, Burmeister retreats to Viborg
27 July	Frederick William joins forces with King Charles at Nowy Dwór, where Swedish engineers rebuild a bridge across the River Bug; further east, King John Casimir's new bridge across the River Vistula at Warsaw is finally ready for use, and a Crimean Tatar corps under Subhan Ghazi Agha arrives to join forces with him; on the Baltic shore, a Dutch fleet of 42 warships under Lieutenant Admiral Jacob Obdam arrives off Danzig to break the Swedish blockade
28–30 July	King Charles's and Frederick William's combined Swedish–Brandenburg army defeats the combined Commonwealth–Tatar army under King John Casimir and Ghazi Agha in the three-day battle of Warsaw; King John Casimir again abandons his capital
29 July	Tsar Alexis's army reaches Dünaburg; a contingent under Semyon Tresnov continues to Kokenhusen
31 July	Detachment from Prince Aleksey Trubetskoy's Pskov Army takes Neuhausen, Livonia
3 August	King John Casimir's defeated army reassembles
6 August	King Charles sends a proposal for an alliance to Bogdan Khmel'nitskiy, using a Polish defector, Hieronim Radziejowski, as middleman; King Charles also informs Khmel'nitskiy that the Crimean participation on the Commonwealth's side was the result of 'Polish intrigues' and not because of the Khan, and that he will try to renew Sweden's old alliance with the Khanate
7 August	Single Swedish naval vessel under Erik Dansonwille defeated by Potyomkin's inshore squadron at Reitskär in the eastern Gulf of Finland; Trubetskoy's Pskov Army lays siege to Dorpat
8 August	King Charles departs from Warsaw
9 August	Wrangel's squadron arrives in Viborg
12 August	Learning of the arrival of Wrangel's squadron, Potyomkin's inshore squadron in the eastern Gulf of Finland returns to the area around Nöteborg; in Poland, King Charles takes Radom; Frederick William reaches Nowe Miasto, but then refuses to continue, claiming the need to protect Prussia above all

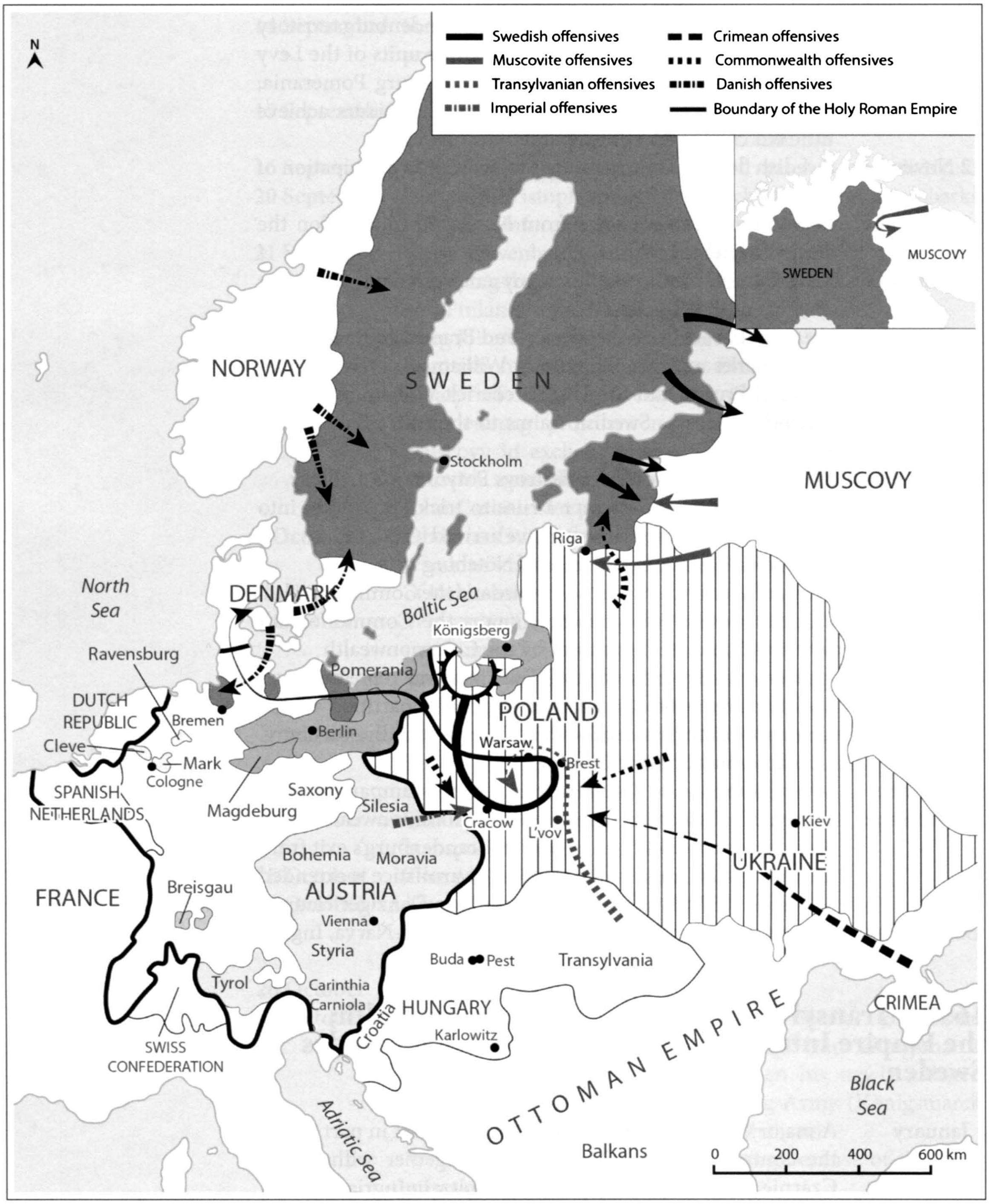
14 August	Muscovites take Dünaburg, massacring its inhabitants and renaming the town Borisoglebsk
15 August	Field Marshal Gustav Adolph Lewenhaupt marches out of Viborg, aiming for Nyen; evacuation to Sweden of archive documents, cannons, and valuables in Warsaw begins
16 August	Major General Georg von Derfflinger takes Bomst, moving into Greater Poland with an army from Brandenburg to take possession of Frederick William's new territories there
17 August	Lewenhaupt dispatches Lieutenant Colonel Erik Pistolhielm to reconnoitre Kexholm; Pistolhielm returns on 21 August
19–20 August	Confident that Warsaw cannot be held, King Charles orders the city's fortifications to be demolished
22 August	Muscovy and the Commonwealth commence negotiations for a truce in Wilno; Lewenhaupt advances towards Nyen, engages in several skirmishes with Sila and Aleksandr Potyomkin; afterwards, Lewenhaupt returns to Viborg
23 August	Tsar Alexis's army reaches Kokenhusen; Gustav Evertsson Horn begins an offensive towards Nyen; Wrangel sails up the Neva to Nyen in a planned joint operation with Horn and Lewenhaupt; finding neither of them, Wrangel returns to the Gulf of Finland
24 August	Muscovites take Kokenhusen, massacring its garrison
24–25 August	Czarniecki and his army together with a strong force of Crimean Tatars plunder a Swedish convoy at Rawa, then defeat a Swedish corps under Hans Böddeker at Łowicz, where Czarniecki is wounded (for which reason he afterwards withdraws to Lublin)
28 August	Wrangel's squadron arrives at Reitskär; in Poland, Major General Barthold Hartwig von Bülow leaves Warsaw, having removed archives, captured cannons, valuable books, and other treasures; small Polish contingent under Andrzej Karol Grudziński surprises and defeats a similarly small Swedish–Brandenburg contingent under Johann Weyckhardt von Wrzesowitz und Neuschloss at Lubrze; the latter falls in the battle
29 August	Prince Yakov Cherkasskiy reaches Riga
1 September	Tsar Alexis lays siege to Riga; in Ingria, Gustav Evertsson Horn unsuccessfully attacks the Muscovite bastion at Ingris; Wrangel returns to Viborg; Lewenhaupt again sets out from Viborg, but this time towards Kexholm
6 September	Gustav Evertsson Horn reaches the abandoned Nyen, destroys the Muscovite palisade there
9 September	Lewenhaupt attempts to relieve Kexholm; he successfully reinforces the garrison but fails to dislodge Pushkin's corps
11 September	Danish fleet of nine warships under Admiral Christopher Linde now join forces with the Dutch fleet at Danzig; Treaty of Elbing between the Netherlands and Sweden ends the Dutch intervention in the siege of Danzig

14 September	Stenbock leaves Danzig, taking up positions at Tilsit as a precaution against Muscovite offensives, and then advances on Memel to enable him to continue north to relieve Riga
15 September	Simon Grundel Helmfelt, the commandant of Riga, sustains a head wound but retains effective command
16 September	Lewenhaupt departs from Kexholm, marches towards Nyen
20 September	Conrad Christoph von Königsmarck's Regiment disembarks in Riga, reinforcing the Swedish garrison there
21 September	Horn, Lewenhaupt, and Wrangel finally join forces at Nyen, signifying the reunification of the Swedish forces from Ingria and Finland in the Karelian Isthmus
25 September	King John Casimir refuses King Charles's proposal on peace negotiations; Danish fleet leaves Danzig
4 October	Treaty of Riga between Brandenburg and Muscovy; Brandenburg promises not to support Sweden against Muscovy in exchange for Muscovite recognition of Ducal Prussia's neutrality; advancing into Greater Poland, King John Casimir storms Łęczyca
6 October	Obdam's Dutch fleet leaves Danzig; however, he leaves 12 warships under Cornelis Tromp; Pushkin abandons the siege of Kexholm
8 October	Wincenty Gosiewski and Subhan Ghazi Agha, with a combined Lithuanian–Crimean Tatar army, defeat a Brandenburg–Swedish army under Georg Friedrich von Waldeck at Prostken and capture Prince Bogusław Radziwiłł; afterwards, Gosiewski and Ghazi Agha ravage Ducal Prussia, burning villages and towns, capturing thousands of civilians destined for the Crimean slave markets
10 October	Tsar Alexis evacuates his siege artillery from Riga by river transport
15 October	Tsar Alexis abandons siege of Riga
22 October	Dorpat surrenders to Trubetskoy's Pskov Army; Stenbock's Swedish–Brandenburg army advances on and defeats Gosiewski's Lithuanians at Filipów
26 October	King John Casimir takes Konitz
29 October	Blown off course on a voyage from Wismar to Prussia, Swedish Field Marshal Hans Christoph von Königsmarck ends up in captivity in Danzig when his newly enlisted Scottish soldiers defect to the Danzig Army (Königsmarck remains a prisoner until the end of the war)
1 November	Wrangel's squadron returns to Viborg because of the early onset of winter
2 November	Last 12 Dutch warships under Tromp leave Danzig
3 November	Muscovy and the Commonwealth conclude the Treaty of Wilno; the Commonwealth promises Tsar Alexis the Polish throne after the death of King John Casimir in return for an armistice
8 November	Royal Prussian units under Jacob von Weiher move into Kalisz after a long siege; soon afterwards, units of the Levy of

	the Nobility of Greater Poland raid the Brandenburg territory of Neumark, east of the River Oder; while units of the Levy of the Nobility of Pomerelia raid Brandenburg Pomerania; lacking artillery and sufficient infantry, the raiders achieve little but create widespread panic
12 November	Swedish fleet off Danzig returns to Sweden in anticipation of winter
13 November	Potyomkin receives orders from Novgorod to abandon the siege of Nöteborg
15 November	King John Casimir and his army enter Danzig, where he remains until February
20 November	Treaty of Labiau between Sweden and Brandenburg, in which King Charles recognises Frederick William as sovereign ruler of Ducal Prussia and Ermland; Frederick William in a secret addendum accepts Swedish claims to the entire Baltic shore except Ducal Prussia
23 November	Major sally from Nöteborg destroys Potyomkin's artillery
26 November	Swedes at Nöteborg attempt a ruse to trick Potyomkin into believing that reinforcements have arrived
27 November	Potyomkin abandons the siege of Nöteborg
1 December	Treaty of Vienna between the Empire and the Commonwealth; Emperor Ferdinand agrees to support the Commonwealth with 4,000 men, to be paid for by the Commonwealth
6 December	In Transylvania, Swedish and Transylvanian representatives sign the Treaty of Radnot, agreeing on a partition of the Commonwealth between Sweden, Transylvania, Brandenburg, Lithuania, and Cossack Ukraine
9 December	Lewenhaupt dies of illness, presumably the rampant plague
12 December	Truce of Zielenzig between the Commonwealth and Brandenburg marks the first step in Brandenburg's exit from the war against King John Casimir (the armistice is extended in March 1657); Swedes repulse assault on Danziger Haupt
19 December	Muscovite raiders unsuccessfully attack Wask-Narva, Ingria

1657 – Transylvania Invades the Commonwealth; the Empire Intervenes in Poland; Denmark Invades Sweden

1 January	A major Commonwealth cavalry force, at least in part under the control of Queen Marie Louise together with Stefan Czarniecki, moves into quarters at Konitz; in Ingria, Colonel Leonhard von Vietinghoff raids several Muscovite camps
2–4 January	Amid what may have been several skirmishes, Rutger von Ascheberg raids Queen Marie Louise's and Czarniecki's quarters at Konitz, after which the Poles retreat south to Exin
6 January	First Transylvanian units enter the Commonwealth; inconclusive battle between Swedes under Major Erik Boije


Swedish offensives
Muscovite offensives
Transylvanian offensives
Imperial offensives
Crimean offensives
Commonwealth offensives
Danish offensives
Boundary of the Holy Roman Empire
N
SWEDEN
MUSCOVY
NORWAY
SWEDEN
Stockholm
MUSCOVY
Riga
North Sea
DENMARK
Baltic Sea
Königsberg
Ravensburg
Pomerania
POLAND
DUTCH REPUBLIC
Bremen
Berlin
Cleve
Mark
Cologne
Warsaw
Brest
SPANISH NETHERLANDS
Saxony
Magdeburg
Silesia
Cracow
L'vov
Kiev
Bohemia
Moravia
UKRAINE
FRANCE
Breisgau
AUSTRIA
Vienna
Styria
Buda
Pest
Transylvania
Tyrol
Carinthia
Carniola
HUNGARY
Croatia
CRIMEA
Karlowitz
SWISS CONFEDERATION
OTTOMAN EMPIRE
Black Sea
Adriatic Sea
Balkans
0
200
400
600 km

Military Operations 1657

	and Muscovites under Lieutenant Colonel Hindrich Hultz in northern Kexholm County
7 January	Gustav Otto Stenbock moves some units into quarters outside Danzig
11 January	Konitz surrenders to Swedes
15 January	In the Lake Ladoga region, Major General Erik Kruse goes on the offensive against Olonets, deliberately devastating the area and massacring its inhabitants
22 January	Prince George Rákóczy leads the Transylvanian army towards L'vov; later, he changes direction to Cracow, which is under siege by Lubomirski; Danzig Army burns the suburbs of Danzig to prevent Stenbock's approach
24 January	Wincenty Gosiewski captures Birze in northern Lithuania after a long siege and with the support of Samogitian nobles
26 January	Paweł Jan Sapieha captures Tykocin in Lithuania, after a long siege
8 February	Learning of the approaching Transylvanian army, Lubomirski abandons the siege of Cracow
9 February	King John Casimir escorted out of Danzig
20 February	Khmel'nitskiy orders units of the cossack army to join forces with the Transylvanian and Swedish armies
26 February	King John Casimir reaches Kalisz; Prince George Rákóczy takes Przeworsk
28 February	King John Casimir reaches Częstochowa
9 March	Swedes destroy dams outside Danzig
21 March	Prince George Rákóczy takes Tarnów
23 March	Treaty of Paris between France and the English Protectorate of Oliver Cromwell against Habsburg Spain persuades Emperor Ferdinand and his son Leopold to form a strong alliance of their own against the French, English, and Swedes – whom they suspect of pro-French sympathies
24 March	Swedish army under King Charles sets out towards the south from Thorn; reports reach the Swedish far north that Muscovites have set out from Kola towards northern Finland, with supplies carried by reindeer; however, the Muscovites turn back before they reach Swedish territory
25 March	King Charles joins forces with a Brandenburg corps under Georg Friedrich von Waldeck
27 March	Swedish raiders from Livonia engage a Muscovite corps from Pskov under Matvey Sheremetyev at the Pskov-Pechory Monastery but fail to dislodge the defenders
30 March	The Emperor signs an agreement to send 12,000 soldiers and artillery, to be paid by the Commonwealth, to assist King John Casimir
2 April	Emperor Ferdinand dies; soon after, an Imperial expeditionary force under Melchior von Hatzfeldt assembles in Silesia
8 April	Lieutenant Colonel Erik Pistolhielm massacres the inhabitants of Tulemajärvi on Lake Ladoga, as part of the

	strategy of devastation introduced in the region by Erik Kruse and sanctioned by Gustav Evertsson Horn
12 April	King Charles and Prince George Rákóczy join forces
23 April	Vasiliy Choglokov replaces Pyotr Pushkin as voivode of Olonets
10 May	Hatzfeldt meets King John Casimir and Czarniecki in Danków to plan joint operations against the Swedes
14 May	Admiral Gustav Wrangel sets out from Stockholm with orders to retake the River Neva between Nyen and Nöteborg
16 May	King Charles and Prince George Rákóczy take Brest
22 May	Hatzfeldt sets out towards Cracow, since the Treaty of Radnot formally under Transylvanian control and held by a combined Swedish–Transylvanian garrison
24 May	Major sortie from Danzig against Swedish lines at Danziger Haupt
27 May	Second Treaty of Vienna: The heir apparent to the Holy Roman Empire, Leopold, ratifies the agreement signed on 30 March to send 12,000 troops and artillery to assist King John Casimir
1 June	Levy of the Nobility of Greater Poland commences a blockade of Posen; Wrangel's squadron departs from the Stockholm archipelago
3 June	Leaving for Prussia with a few men, King Charles parts company with Prince George Rákóczy; Stenbock assumes command of the Swedish field army, with instructions to follow the King to Prussia in due time
6 June	News of the Second Treaty of Vienna reaches Warsaw
10 June	Wrangel's squadron reaches Nyen
11 June	Having received news of the Second Treaty of Vienna, Denmark declares war on Sweden
14 June	Transylvanians and Ukrainian cossacks under Prince George Rákóczy lay siege to Warsaw, with Swedes under Stenbock on their way in support
15 June	Denmark's declaration of war on Sweden is delivered to Halmstad, in the Swedish province of Halland
16 June	Swedish Ladoga squadron, under Petter Holländer Ridder, forces the Muscovite Lava squadron to take cover at the shore, protected by superior infantry forces
17 June	Nowy Dwór and Warsaw surrender to Stenbock and Prince George Rákóczy
19 June	Swedes under Major General Friedrich Löwe defeat Muscovites under Matvey Sheremetyev at Walk, Livonia; Imperial main force crosses the border into the Commonwealth, advances towards Cracow
20 June	Stenbock receives orders to part company with Prince George Rákóczy and instead join the King
23 June	Stenbock and Prince George Rákóczy leave Warsaw and then go their separate ways

25 June	Swedes and Muscovites at Lake Ladoga engage with land and naval units; both sides claim victory but neither gains the advantage
26 June	Danish army advances across the River Elbe, into Swedish Bremen-Verden
30 June	In Thorn, King Charles receives the news about the Danish declaration of war
3 July	King Charles and Stenbock meet at Bromberg; soon afterwards, Stenbock returns to Sweden
5 July	King Charles sets out from Bromberg, bound for Denmark by way of Swedish Pomerania
7 July	Brandenburg contingent leaves its Swedish and Transylvanian allies at Pułtusk north of Warsaw, departs to the north
11 July	Poles under Czarniecki and Tatars under Mehmed Khan defeat Transylvanians and cossacks at Magierów, between Cracow and L'vov, capturing parts of their supply train; afterwards, the cossacks mutiny and abandon the campaign
12 July	King Charles reaches Stettin, Swedish Pomerania
18 July	The Commonwealth and Denmark sign a formal alliance against Sweden (ratified by the Commonwealth on 6 September)

Dramatis Personae

Sweden

Adolph John (1629–1689), Duke and *Generalissimus*. Brother of King Charles.

Ascheberg, Rutger von (1621–1693), Colonel. Veteran from Courland who had risen from the ranks in Swedish service during the Thirty Years' War, which he had entered as a common cavalryman.

Bülow, Barthold Hartwig von (1611–1667), Major General, from 1659 Lieutenant General. Veteran of the Thirty Years' War who had fought at Nördlingen 1634 under Bernard of Saxe-Weimar as well as in other battles.

Burmeister, Christopher (*c.* 1600–1671), Colonel. Veteran of the Thirty Years' War from Estonia.

Dahlbergh, Erik Jönsson (1625–1703), Lieutenant Quartermaster-General. Military engineer and fortification officer with experience from the Thirty Years' War. Ennobled as Dahlbergh in 1660.

De la Gardie, Jacob Casimir (1629–1658), Lieutenant General, from 1658 General of Infantry. Brother-in-law of King Charles and the son of the first governor of Swedish Livonia. Veteran of French service from 1646 including, in 1648, under Louis, Prince of Condé.

De la Gardie, Magnus Gabriel (1622–1686), Lieutenant General, brother-in-law of King Charles, and the son of the first governor of Swedish Livonia. Brother of Jacob Casimir De la Gardie. Although with some military experience from the Thirty Years' War (in 1645 in Scania and in the 1648 siege of Prague), unlike his father and brother he was more of a courtier and diplomat than a soldier and by 1655 he served as Governor-General of Livonia. His skill lay more in the political than the military sphere.

Douglas, Robert (1611–1662), Count. General of Cavalry, from 1656 Field Marshal Lieutenant, and from 1657 Field Marshal. Scottish veteran of the Thirty Years' War who had distinguished himself on numerous occasions, including in the battles of Lützen 1632, Wittstock 1636, and Jankow 1645.

Fersen, Fabian von (1626–1677), Colonel and, from 1658, Major General. Veteran of the Thirty Years' War.

Fersen, Otto Wilhelm von (1623–1703), Lieutenant Colonel of the Life Guard and, from 1657, Colonel. Veteran of the Thirty Years' War.

Frederick of Baden-Durlach (1617–1677), Margrave. General of Cavalry and brother-in-law of King Charles. Veteran of the Thirty Years' War.

Frederick of Hesse-Eschwege (1617–1655), Landgrave. Major General and brother-in-law of King Charles.

Helmfelt, Simon Grundel (1617–1677), Colonel, from 1655 Major General, and from 1658 Lieutenant General. Veteran of the Thirty Years' War with particular expertise in fortifications and artillery technology, he from 1656 served as Governor of Riga and from 1659 as Governor-General of Ingria.

Horn, Bengt Claesson, af Åminne (1623–1678), Colonel. Commander of the Queen's Life Regiment of Foot 1655, Major General of Infantry and Governor-General of Estonia from 1656 to 1659.

Horn, Christer Claesson, af Åminne (1622–1692), Major General. Governor-General of Ingria from 1657 to 1659. Brother of Bengt Horn.

Horn, Gustav, af Björneborg (1592–1657), Grand Marshal of the Realm. Renowned but aged veteran and field marshal of the Thirty Years' War.

Horn, Gustav Evertsson, af Marienborg (1614–1666), Lieutenant General of Cavalry and Governor-General of Ingria and Kexholm County. Veteran of the Thirty Years' War who had fought in the battle of Jankow 1645. In 1657 promoted to General of Cavalry and commander of the army in Finland and Kexholm County. Horn was the nephew of the renowned Grand Marshal Gustav Horn.

Horn, Henrik Henriksson, af Marienborg (1618–1693), Major General of Cavalry. Veteran of the Thirty Years' War, commander of the Tavastehus Cavalry Regiment which fought in Poland, in 1656 or 1657 promoted to Lieutenant General, and from 1658 commander of the army in Finland. Cousin of Gustav Evertsson Horn.

Königsmarck, Conrad Christoph von (1634–1673), Colonel. Son of Hans Christoph von Königsmarck and newly appointed head of an enlisted regiment.

Königsmarck, Hans Christoph von (1605–1663), Field Marshal. Veteran of the Thirty Years' War from Brandenburg in Swedish service who had distinguished himself on numerous occasions, including in the conquest of Prague Castle 1648.

Kruse, Erik (1617–1665), Colonel, in 1656 Major General of Cavalry, and in 1659 Lieutenant General. Veteran of the Thirty Years' War and sometime deputy commander of the army in Finland.

Lewenhaupt, Carl Mauritz (1620–1666), Major General of Cavalry and, from 1658, Lieutenant General of Cavalry. Brother of Gustav Adolph Lewenhaupt. Veteran of the Thirty Years' War.

Lewenhaupt, Gustav Adolph (1619–1656), Field Marshal and commander in Livonia and Finland. Veteran of the Thirty Years' War who had distinguished himself in the second battle of Breitenfeld 1642, in Gustav Horn's 1644 campaign in Scania, and in the battle of Jankow 1645.

Lewenhaupt, Ludwig Wierich (1622–1668), Colonel, from 1659 Major General of Cavalry.

Linde, Lorenz von der (1610–1670), General of Infantry. Bon vivant, rake, and veteran of the Thirty Years' War.

Löwe, Friedrich 'Fritz' (d. 1669), Major General of Cavalry, in 1657 promoted to Lieutenant General. Veteran of the Thirty Years' War who entered Swedish service as a common cavalryman, suffered wounds on 19 occasions, but never learnt Swedish or to read orders written in Swedish. Naturalised into the Swedish nobility in 1649, his children changed the name to von Löwen.

Lühne, Burchard Müller von der (1604–1670), Lieutenant General. Veteran of King Gustavus Adolphus's war against the Commonwealth as well as in numerous battles in Germany during the Thirty Years' War.

Oxenstierna, Erik (1624–1656). Lord High Chancellor of Sweden and Governor-General of Swedish-held Prussia. Son of the late Lord High Chancellor Axel Oxenstierna.

Oxenstierna, Bengt (1623–1702). Governor-General of Swedish-held Poland. Son of Grand Admiral of the Realm Gabriel Bengtsson Oxenstierna.

Oxenstierna, Gustav (1626–1693), Colonel, from 1657 Major General. Brother of Bengt Oxenstierna.

Philip Florinus of Sulzbach (1630–1703; also known as Philipp of Pfalz-Sulzbach), Count Palatine and Major General of Cavalry. In 1658 promoted to General of Cavalry and, in 1659, Field Marshal. A relative of King Charles, he began his military career in the Duchy of Lorraine but in 1655 went into Swedish service with an enlisted regiment.

Pistolhielm, Erik Persson (d. 1669), Major, from 1657 Lieutenant Colonel, and from late 1658 Colonel of the Viborg Cavalry Regiment.

Stenbock, Erik (1612–1659), Major General. Commander in Pomerania. Veteran of the Thirty Years' War who had commanded the Life Guard in the battle of Lützen 1632.

Stenbock, Gustav Otto (1614–1685), Field Marshal from 1656. Veteran of the Thirty Years' War who had distinguished himself in many battles including Nördlingen 1634, Wittstock 1636, and the second battle of Breitenfeld 1642 and before his promotion to Field Marshal served as national chief of artillery (*rikstygmästare*). Brother of Erik Stenbock.

Thurn, Henrik von (1628–1656), Major General and Count. Grandson of Heinrich Matthias von Thurn, who led the Bohemian Revolt which initiated the Thirty Years' War and then went into Swedish service.

Wittenberg von Debern, Arvid (1606–1657), Field Marshal. Veteran who began his military career in 1622, fought under King Gustavus Adolphus in Prussia against the Commonwealth as well as in numerous battles of the Thirty Years' War, including Nördlingen 1634, Wittstock 1636, the second battle of Breitenfeld 1642, and Jankow 1645.

Wrangel, Carl Gustav, af Salmis (1613–1676), Field Marshal and Admiral. Veteran of the Thirty Years' War who in 1646–1648 held overall command over Swedish military forces in Germany.

Wrangel, Gustav, af Adinal (1630–1688), Vice-Admiral.

Wrzesowitz und Neuschloss, Johann Weyckhardt von (1623–1656), Major General.Veteran of the Thirty Years' War from Moravia in Swedish service.

Würtz, Paul (1612–1676), Major General, from 1658 Lieutenant General.

Commandant of first Stade, then, following its conquest in 1655, Cracow, and finally Stettin.Veteran of the Thirty Years' War.

Polish-Lithuanian Commonwealth

Czarniecki, Stefan (*c.* 1599–1665), Colonel. Castellan of Kiev from 1655. Veteran of numerous wars including against Gustavus Adolphus's Swedes in Prussia, Muscovites, Ottoman Turks, Tatars, cossacks, and in Imperial service in the Thirty Years' War.

Dönhoff, Heinrich (*c.* 1585–1659; Polish: Henryk Denhoff), Colonel. Prussian noble who in 1626–1629 fought in the Commonwealth army against Swedish King Gustavus Adolphus, in 1633–1634 commanded a Commonwealth German cavalry regiment in the Smolensk War against Muscovy, and later fought cossack rebels and Crimean Tatars.

Getkant, Fryderyk or **Friedrich** (1600–1666; Lithuanian: Frydrichas Gedkantas), Lieutenant Colonel. Experienced military cartographer, artilleryman, and fortification officer who served as deputy head of the Crown Artillery.

Gosiewski, Wincenty Aleksander Korwin (*c.* 1620–1662), Lithuanian Field Hetman. Formerly General of Artillery of Lithuania.

Grodzicki, Krzysztof (d. 1659), Crown General of Artillery since 1653. Veteran of the Thirty Years' War who fought Gustavus Adolphus's Swedes in Prussia, studied in the Dutch Republic, served in the Imperial army under Wallenstein, and in the 1640s fought cossacks and Tatars.

Kettler, Jacob (1610–1682), Duke of Courland and brother-in-law of Frederick William of Brandenburg. Veteran of the Smolensk War with Muscovy and efficient entrepreneur, with colonies established in West Africa and Tobago.

Komorowski, Samuel Aleksander (d. 1659), Colonel. Lithuanian veteran of the Smolensk War against Muscovy and combat against cossacks.

Koniecpolski, Aleksander (1620–1659), Prince and Colonel. Voivode of Sandomierz and Grand Standard-bearer of the Crown (*chorąży wielki koronny; vexillifer regni*), a court rank. Son of Stanisław Koniecpolski who fought Gustavus Adolphus.

Lanckoroński, Stanisław (*c.* 1597–1657), Crown Field Hetman from 1654 to 1657. In the 1620s, he experienced fighting the Tatars for a while and participated in the war against Gustavus Adolphus in Prussia

Lubomirski, Jerzy Sebastian (1616–1667), noble and magnate. Crown Field Hetman from 1657 to 1664.

Pac, Michał Kazimierz (1624–1682), noble and magnate.

Pac, Mikołaj Stefan (*c.* 1626–1684), noble and magnate. Voivode of Trakai and self-appointed head of the Lithuanian pro-Muscovite government.

Połubiński, Aleksander Hilary (1626–1679), Lithuanian Field Scribe and hussar commander.

Potocki, Andrzej (1618–1663), noble and magnate. Crown Equerry (*oboźny koronny; praefectus curruum*), a court rank, from 1655, Voivode of Bratslav from 1662 to 1663.

Potocki, Andrzej (*c.* 1630–1691), noble and magnate. Son of Stanisław 'Rewera' Potocki.

Potocki, Stanisław 'Rewera' (1589–1667), Crown Grand Hetman. Veteran of wars with Muscovy, Sweden, and Ukrainian cossacks. He acquired the nickname 'Rewera' because he so often included the Latin words *re vera* ('in fact') in his speeches.

Radziwiłł, Bogusław (1620–1669; Lithuanian: Boguslavas Radvila), Prince. Veteran of the Thirty Years' War, in Swedish service under Carl Gustav Wrangel from 1637, followed by Dutch service from 1642.

Radziwiłł, Janusz (1612–1655; Lithuanian: Jonušas Radvila), Lithuanian Grand Hetman and Prince.

Radziwiłł, Michał Kazimierz (1625–1680; Lithuanian: Mykolas Kazimieras Radvila), Prince. Leader of the Catholic branch of the Radziwiłł family.

Sapieha, Jan Fryderyk (1618–1664; Lithuanian: Jonas Frederikas Sapiega), noble and magnate. Crown Field Scribe. Veteran of the French army, in which he fought under Louis, Duke d'Enghien, later Prince of Condé, and the wars against Ukrainian cossacks and Tatars.

Sapieha, Paweł Jan (1609–1665; Lithuanian: Povilas Jonas Sapiega), Lithuanian Grand Hetman. Veteran of the Smolensk War against Muscovy and wars with Ukrainian cossacks.

Weiher, Jacob von (1609–1657; Polish: Jakub Weyher), Voivode of Marienburg. Veteran of Wallenstein's Imperial army in the Thirty Years' War, the Smolensk War against Muscovy, and wars with Tatars and cossacks.

Zamoyski, Jan 'Sobiepan' (1627–1665), noble and magnate. From 1658, Voivode of Kiev, and from 1659, Voivode of Sandomierz.

Brandenburg

Derfflinger, Georg von (1606–1695), Major General, in 1657 Lieutenant General. Austrian veteran of the Thirty Years' War in Swedish service.

Goltz, Joachim Rüdiger von der (1620–1688), Major General (*Generalwachtmeister*). Prussian veteran of Imperial service in the Thirty Years' War, followed by French service until he entered into the service of Brandenburg in 1654 with the rank of colonel.

Kannenberg, Christoph von (1615–1673), Major General. Veteran of the Thirty Years' War who rose through the ranks from a common cavalryman in Swedish service.

Sparr, Otto Christoph von (1599 or 1605–1668), General, from 1657 Field Marshal General (*Generalfeldmarschall*). Veteran of the Thirty Years' War in Imperial service who from 1651 served as overall chief of artillery (*Generalfeldzeugmeister*) and from 1655 was overall commander of all Brandenburg-Prussian troops.

Waldeck, Georg Friedrich von (1620–1692), Lieutenant General and Count. Veteran of the Thirty Years' War in Dutch service. Commander of the army in Prussia until 1655. Dismissed in 1658, he went into Swedish service and fought for King Charles in Denmark.

Waldeck, Josias von (1636–1669), Captain, promoted to Lieutenant Colonel in December 1656, and Count. Nephew of Georg Friedrich von Waldeck.

Waldeck, Wolrad von (1625–1657), Colonel, from 1656 Major General (*Generalwachtmeister*), and Count. Brother of Georg Friedrich von Waldeck.

Muscovy

Baryatinskiy, Yuriy Nikitich (*c.* 1610–1685), Prince and, from 1659, Commandant of Kiev.

Buturlin, Andrey Vasil'yevich (d. 1676), Boyar. Commanded a corps in the Ukraine from 1654 onwards. Commandant of Kiev from 1656 to 1658, Division Commander in the Ukraine in 1659, and Commandant of Pereyaslav from 1660 to 1661.

Buturlin, Fyodor Vasil'yevich (d. 1673), Boyar. Fought in the Ukraine under Vasiliy Borisovich Sheremetyev from 1654 to 1655.

Buturlin, Vasiliy Vasil'yevich (d. 1656), Boyar. Fought in the Tsar's army in the Smolensk campaign in 1654, and in 1655 commanded a corps in the Ukraine.

Chelishchev, Boris Grigor'yevich, alias **Yenaklych Chebotayev syn** (d. 1663), Voivode. Officer of diverse experiences which included prospecting for precious metals, Tatar affairs, and the diplomatic service, which once took him to Sweden.

Cherkasskiy, Yakov Kudenetovich (d. 1666), Prince and Commander of Tsar Alexis's Great Division, thereby the Tsar's deputy commander. Member of a Kabardian princely family from the Caucasus, known as Uruskan Murza before his baptism.

Choglokov, Vasiliy Aleksandrovich (d. 1667), Boyar. Voivode of Olonets from 1657. An experienced officer who from the end of the Time of Troubles and the 1613 accession of Michael Romanov served in various locations including Siberia and the Arctic north, in 1646/1647 also fought Tatar raiders, and in 1656 served as a diplomat during the negotiations which resulted in the Treaty of Wilno.

Dolgorukov, Yuriy Alekseyevich (*c.* 1610–1682), Prince, Division Commander of the Bryansk Army, and then Army Commander.

Golitsyn, Ivan Andreyevich (d. 1685), Prince, Commander of the Novgorod Army from 1655 to 1657.

Khovanskiy, Ivan Andreyevich (d. 1682), Prince, Voivode of Pskov, and, from 1659, Commander of the Novgorod Army.

Kurakin, Fyodor Fyodorovich (d. 1684), Prince and Commander of the Ryazan' Army. Son of Fyodor Semyonovich Kurakin.

Kurakin, Fyodor Semyonovich (d. 1656), Prince and, from 1653 to 1654, Commandant of Kiev.

Kurakin, Grigoriy Semyonovich (fl. 1629–*c.* 1682), Prince, from 1657 to 1659 Commander of the Novgorod Army.

Ladyzhenskiy, Fyodor Abrosimovich (d. 1676),Boyar. Voivode of Lava from 1658.

Odoyevskiy, Nikita Ivanovich (*c.* 1605–1689), Prince and, in 1654, Commander of Tsar Alexis's Vanguard Division.

Ordin-Nashchokin, Afanasiy Lavrent'yevich (1605–1680), Boyar and diplomat.

Potyomkin, Aleksandr Semyonovich (fl. 1656–1657), Voivode of Lava from 1657.

Potyomkin, Pyotr Ivanovich (1617–1700), Voivode of Lava until 1657. Veteran of the war in the Ukraine. Distant relative of Aleksandr Potyomkin.

Potyomkin, Sila Semyonovich (fl. 1656–1686), Voivode. Sub-commander of Lava. The (possibly elder) brother of Aleksandr Potyomkin.

Pozharskiy, Semyon Romanovich (*c.* 1611–1659), Prince and Division Commander of the Ryazan' Army.

Pushkin, Pyotr Mikhaylovich (d. 1684), Voivode of Smolensk after its conquest in 1655, from 1656 to 1657 Voivode of Olonets.

Romodanovskiy, Grigoriy Grigor'yevich (d. 1682), Prince and, from 1658, Commander of the Belgorod Army.

Shchetinin, Mikhail Ivanovich (fl. 1640–1658), Prince. Commandant of Pskov from 1656 to 1658 and of Dorpat in 1658.

Sheremetyev, Matvey Vasil'yevich (1629–1657), Boyar and Commander of the Pskov Army, son of Vasiliy Petrovich Sheremetyev.

Sheremetyev, Vasiliy Borisovich (1622–1682), Boyar and Commander of the Belgorod Army in the Ukraine from 1654 and, from 1658 to 1659, Commandant of Kiev.

Sheremetyev, Vasiliy Petrovich (d. 1659), Boyar and, in 1654, Commander of the Novgorod Army.

Solntsev, Vasiliy Andreyevich (fl 1657), Prince. Corps Commander of the Novgorod Army.

Trubetskoy, Aleksey Nikitich (1600–1680), Prince and Commander of the Bryansk Army, followed by, from 1656, the Pskov Army and, from 1659, the army in the Ukraine.

Urusov, Semyon Andreyevich (*c.* 1610–1657), Prince of Tatar origin, and in 1655 Commander of the Novgorod Army.

Volkonskiy, Fyodor Fyodorovich (d. 1665), Prince and, from 1654 to 1655, Commandant of Kiev, followed by service as a diplomat.

Cossack Ukraine

Barabash, Yakov Fyodorovich (d. 1658), Ataman of the Zaporozhian Host.

Bespalyy, Ivan Fyodorovich (fl. 1619–1662), Ruthenian noble, Colonel of the Uman' Regiment, and Acting Hetman of the Zaporozhian Host from 1658 to 1659.

Bogun, Ivan (*c.* 1618–1664; name before joining the cossacks unknown, although his patronym sometimes given as Fyodorovich), Colonel of the Kal'nik, Pavolotsk, and Chigirin Regiments and Acting Hetman of the Zaporozhian Host from 1663 to 1664. Key leader of the pro-Swedish party among the cossacks.

Bryukhovetskiy, Ivan Martynovich (1623–1668), Ataman of the Zaporozhian Host, Hetman of Left-bank Ukraine from 1663, ennobled as Boyar in Muscovy in 1664, and wedded to the daughter of Prince Dmitriy Alekseyevich Dolgorukov in 1665.

Doroshenko, Pyotr Dorofeyevich (1627–1698), Ruthenian noble and Hetman of Right-bank Ukraine from 1665.

Nechay, Ivan Nechayev (fl. 1655–1669), Ruthenian noble, son-in-law of Bogdan Khmel'nitskiy, and Colonel of the Belarus Cossack Host.

Nemirich, Yuriy Stefanovich (1612–1659; also known as Georg or Jerzy Niemirycz), Ruthenian noble and Ivan Vygovskiy's chancellor. First swearing allegiance to the Swedish Crown, for whom he enlisted a cossack-style cavalry unit and assisted with the preparatory work for the Treaty of Radnot; in 1657 he switched sides to the Cossack Hetmanate and converted to Orthodox Christianity. Key leader of the pro-Swedish party among the cossacks, until in May 1659 he again swore fealty to King John Casimir.

Pushkar', Martyn Ivanovich (1598–1658), Colonel of the Poltava Regiment.

Serko, Ivan Dmitriyevich (*c.* 1610–1680), Colonel of the Kal'nik Regiment and Ataman of the Zaporozhian Host.

Silich, Anikey Korchak (d. 1663), Ruthenian noble and Colonel of the Chernigov Regiment.

Somko, Yakov Semyonovich (d. 1663), Colonel of the Pereyaslav Regiment and Acting Hetman of the Zaporozhian Host from 1661 to 1663.

Teterya, Pavel Ivanovich (1620–1670; earlier known as Paweł Morzkowski), Ruthenian noble, Colonel of the Pereyaslav Regiment, and Hetman of Right-bank Ukraine from 1663 to 1665.

Tsetsyura, Timofey Yermolovich (d. 1671), Colonel of the Pereyaslav Regiment and Acting Hetman of the Zaporozhian Host in 1660.

Vygovskiy, Danilo Yevstaf'yevich (d. 1659), Ruthenian noble, brother of Ivan Vygovskiy, and sometime Colonel of the Bykhov Regiment.

Vygovskiy, Ivan Yevstaf'yevich (*c.* 1608–1664), Ruthenian noble, Bogdan Khmel'nitskiy's chancellor, and Hetman of the Zaporozhian Host and Cossack Ukraine from 1657 to 1659.

Vygovskiy, Konstantin Yevstaf'yevich (fl. 1658), Ruthenian noble, brother of Ivan Vygovskiy and Colonel of the Turov-Pinsk Regiment.

Zolotarenko, Ivan Nikiforovich (d. 1655), brother-in-law of Bogdan Khmel'nitskiy, Colonel of the Nezhin Regiment, and Acting Hetman of the Zaporozhian Host from 1654 to 1655.

Zolotarenko, Vasiliy Nikiforovich (d. 1663), younger brother of Ivan Zolotarenko and Colonel of the Nezhin Regiment from 1655 to 1656.

Transylvania

Bethlen, János (1613–1678). Chancellor of Transylvania and Commandant of Cracow, after Transylvania assumed formal control of the city.

Kemény, János (1607–1662). Deputy commander of the Transylvanian field army. Veteran of Transylvania's participation in the Thirty Years' War.

Imperial Expeditionary Force

Hatzfeldt, Melchior von (1593–1658), Field Marshal General. Veteran of the Thirty Years' War during which he repeatedly fought Swedish armies.

Montecuccoli, Raimondo (1609–1680), Field Marshal Lieutenant and from 1658, Field Marshal. Italian veteran of the Thirty Years' War who, while then in Swedish captivity, wrote an influential treatise on the art of war.

Souches, Jean-Louis Raduit de (1608–1682), General of Cavalry, and from 1658 chief of artillery (*Generalfeldzeugmeister*). French Huguenot veteran of the Thirty Years' War who after deserting from Swedish service for challenging a superior officer to a duel, when duels were illegal, went into Imperial service.

Sporck, Johann von (1600–1679), General of Cavalry. Veteran of the Thirty Years' War who rose in the ranks from either common cavalryman or drummer in the Bavarian army.

Khanate of the Crimea

Geray, Adil (1617–1672), Nureddin Sultan until 1659. Mehmed Khan's younger brother. Appointed Khan in 1666.

Geray, Ahmad (fl. 1659), Prince. Mehmed Khan's eldest son.

Geray, Ghazi (fl. 1655), Qalgha Sultan. Mehmed Khan's nephew.

Geray, Murad (1627–1696), Nureddin Sultan 1659–1663. From another line of the Geray family, appointed Khan in 1678.

Geray, Selim (1631–1704), Prince. Appointed Khan in 1684.

Ghazi Agha, Subhan (fl. 1656). Officer and corps commander.

Qaplan Murza (fl. 1658). Noble and corps commander.

Prologue: Eight Contenders

Charles X Gustavus, King of Sweden

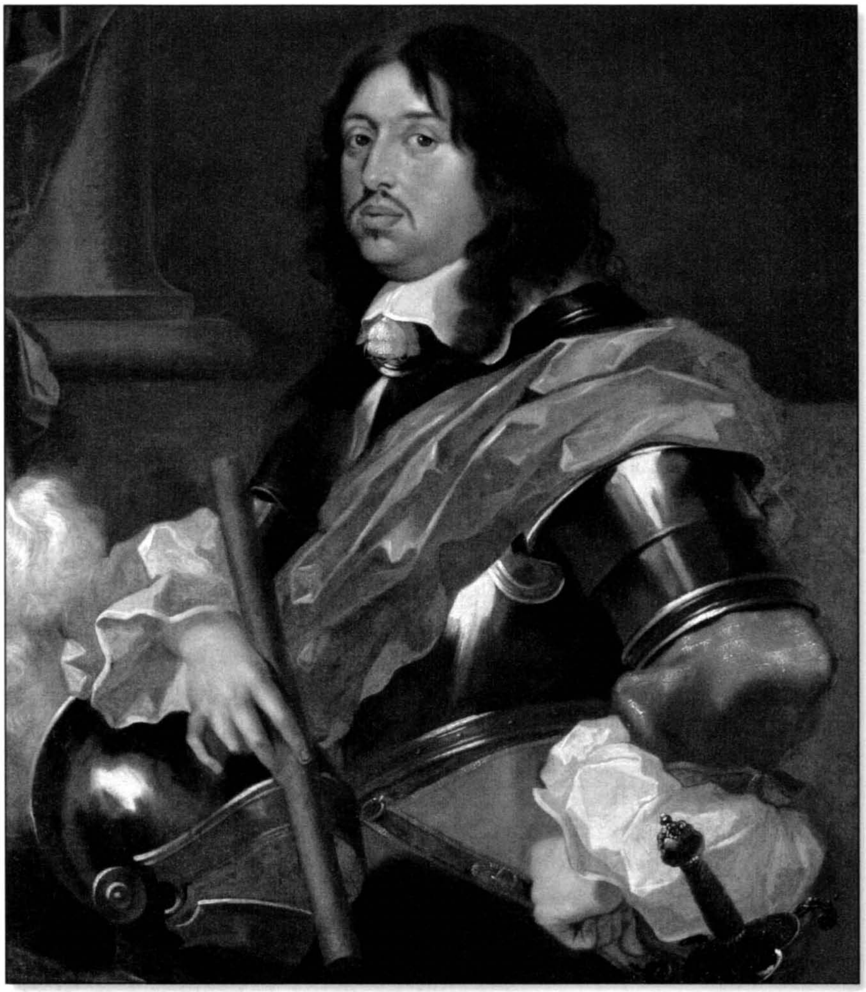
Charles X Gustavus (1622–1660; r. 1654–1660) was the son of John Casimir, Count Palatine of Zweibrücken-Kleeburg in Germany, and Catherine, daughter of Swedish King Charles IX of the House of Vasa. Charles Gustavus was born in Sweden, where he also grew up.

Charles Gustavus joined the Swedish army in Germany in 1642 as a 20-year-old volunteer, just before the second battle of Breitenfeld. Serving under Field Marshal Lennart Torstensson, Charles Gustavus also fought in the war in Denmark from 1643 to 1644 and in the battle of Jankow in 1645. He rose in rank rapidly, because of his skill no less than because of his birth. In the summer of 1643 he was appointed captain in Torstensson's Life Regiment of Horse. A few months later, he was given command of the Courland cavalry regiment, which he commanded at Jankow; in this battle he served under then Major General Arvid Wittenberg, who a decade later would spearhead the Swedish invasion of the Commonwealth. But it was Torstensson who taught the young man how to handle a modern army. Years later, having become King of Sweden, Charles Gustavus concluded that 'for everything which I know [of military affairs], I should give thanks to Torstensson'.[1]

Charles Gustavus was the cousin of Queen Christina of Sweden (1626–1689: r. 1632–1654). When both were very young, the two had been sweethearts, and Queen Christina had promised to marry him in due time. However, in 1648 she appointed Charles Gustavus her lieutenant general and commander-in-chief (*Generalissimus*) of the Swedish forces in Germany. Christina had planned this for several months, as a means to avoid marriage with him. As the new commander-in-chief, Charles Gustavus was ambitious and warlike, and by no means eager for peace. Nonetheless, when the Peace of Westphalia was signed later in the year, he accepted the task of demobilising the considerable Swedish army in Germany. This was no easy matter, but he showed his ability. Without him, it is unlikely that the agreed upon demobilisation process would have taken place as smoothly as it did.

---

[1] Försvarsstabens krigshistoriska avdelning, *Slaget vid Jankow 1645 24/2 1945: Minnesskrift* (Stockholm: Försvarsstabens krigshistoriska avdelning, 1945), p.8.



Charles Gustavus, 1652 or 1653. (Sébastien Bourdon)

When Queen Christina abdicated in June 1654 (she converted to the Catholic faith and moved to Rome), Charles Gustavus became king in her stead. He married Hedwig Eleonora of Holstein-Gottorp (1636–1715) soon after his coronation in 1654, and, although as was customary among royal families theirs was an arranged union, there is every reason to believe that their marriage was a happy one. King Charles liked to have Hedwig Eleonora at his side, even while on campaign. Soon after giving birth to their son, the future King Charles XI, Hedwig Eleonora travelled to the Swedish field army in Poland. She attended the three-day battle of Warsaw and resided for a while in Marienburg, before she returned to Sweden's capital Stockholm in autumn 1656. In 1658 she also followed King Charles to the war in Denmark, where the two for a while stayed in Kronborg castle in Helsingør, already immortalised by Shakespeare as Elsinore. Meanwhile, their young son remained in Sweden, where he was kept safe during the wars.

King Charles was highly educated. Growing up speaking German with his parents, he also knew Swedish, French, Latin, and some Italian. He was a Lutheran, since this was the requirement for Swedish kingship (his father had been a Calvinist). There is nothing to suggest that he was overly pious.

Although King Charles came to focus on military affairs, he was no stranger to administrative and fiscal tasks and was diligent in their execution. During the Thirty Years' War, King Gustavus Adolphus and his Chancellor Axel Oxenstierna had greatly improved Sweden's economy through the encouragement of trade and manufacture. Yet, proceeds remained insufficient to fund a prolonged war, and the Crown had ended up owing money to many, including those colonels who enlisted regiments for the war effort but also civilian officials whose salaries could not be paid when the Crown lacked funds. Sweden still suffered from state poverty. The only means available to service the considerable national debt was the transfer of Crown lands to those whom the Crown owed money, which primarily was the upper strata of the nobility. King Charles realised that the only way out of the situation was through a *reduktion*, a resumption of those former royal lands which since the death of King Gustavus Adolphus had been alienated through their transfer to private ownership. In 1655, King Charles presented the Council of the Realm and the Noble Estate with an ultimatum: consent either to the *reduktion* of alienated royal lands or face massive annual payments in the form of taxation. As a result, it was agreed that one quarter of lands alienated since 1632 would be returned to the Crown. Unfortunately, the King's long absence abroad and unexpected early death meant that the reform could not be carried out in its entirety. Paradoxically, state poverty remained a problem throughout Sweden's period as a great regional power.

King Charles thrived at war and was physically brave. Trusting in God and his good fortune, he led from the front, often at considerable personal risk. He was a lucky soldier, surviving personal combat against seemingly impossible odds on numerous occasions. Despite a lifetime of war, he seems never to have suffered a wound - even though his hat, coat, and shirt often were shot through and once he even lost a lock of hair from enemy fire. As a commander, King Charles was an audacious tactician who had no match among his opponents. When young, he had read the Latin classics about the campaigns of Alexander the Great and other celebrated commanders of antiquity. Even at the end of his life, he would occasionally quote an anecdote about Alexander, which suggests that he regarded himself as a man of a similar mould. Torstensson's influence on the King's tactical and strategic thought cannot be overstated. The notion of achieving a gainful peace through a decisive victory on the battlefield and the destruction of an enemy army was not yet part of Swedish strategic thought, and it can be argued that such notions, which emerged later, had little relationship to reality. Torstensson, who was not shy to lead his army into battle and habitually planned his actions better than most, summarised the then Swedish view on the risks of offering battle:

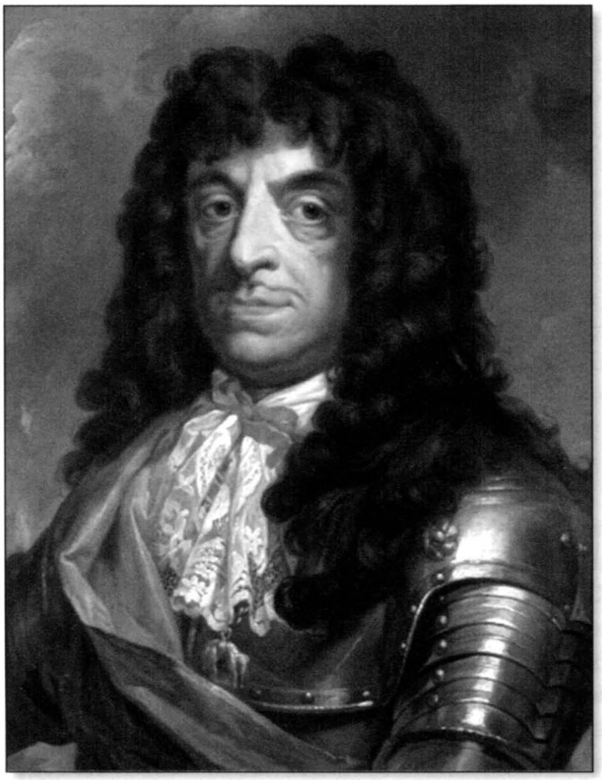
> There is nothing more hazardous than to chance a battle. You may lose it through a thousand unforeseen accidents, even when you have carefully taken all measures and steps available to the most flawless military expertise.[2]

---

[2] Peter Englund, *Ofredsår: Om den svenska stormaktstiden och en man i dess mitt* (Stockholm: Atlantis, 1993), p.384.

King Charles followed Torstensson's advice. He was meticulous in planning his campaigns but also ready to take chances when a good opportunity arose. He did not neglect diplomacy. He sent envoys to all potential allies and adversaries, including the Khan of the Crimea and the Ottoman Empire. He habitually kept all options open as long as he could, before committing himself to a particular course of action, so that he could make full use of any opportunity that arose. What others, then and later, may have interpreted as the instinct of a gambler was rather the result of King Charles's willingness to use every opportunity available to him. This characteristic made him keep his long-term plans to himself, which incidentally makes it difficult for later historians to distinguish between what he regarded as his primary objectives and those which he merely took advantage of in an opportunistic manner. Perhaps it is fair to conclude that he was a competent but not brilliant strategist.

John II Casimir, King of Poland and Grand Duke of Lithuania

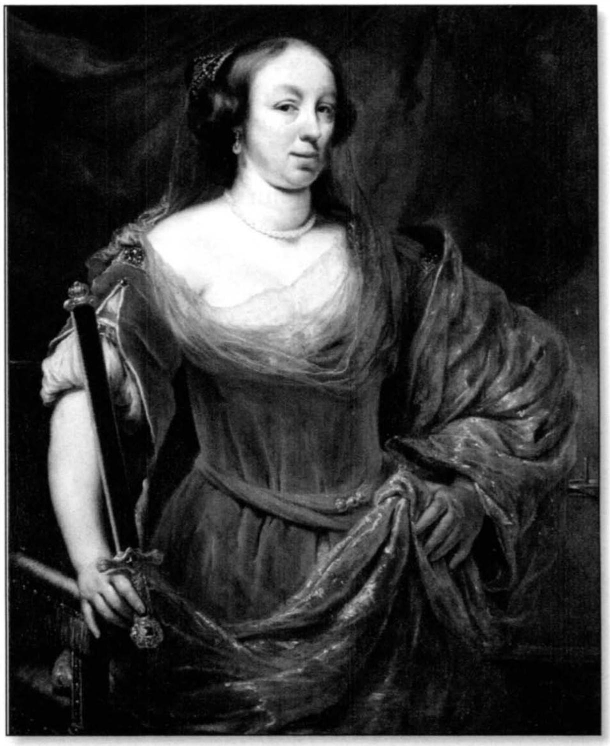


John II Casimir. (Marcello Bacciarelli)

John II Casimir Vasa (Polish: Jan II Kazimierz Waza; 1609–1672, r. 1648–1668), King of Poland and Grand Duke of Lithuania, was born a younger son who at first seemed to have no prospects within the Commonwealth. The parliament (*Sejm*) never granted him an adequate income, despite his eligibility to the throne. As a result, the young John Casimir attempted to make a name for himself elsewhere. He took part in the war against Sweden in 1629 and in the Smolensk War against Muscovy in 1633. He also fought in the Thirty Years' War. In 1635, he was briefly in Imperial service as colonel of a regiment which fought, and lost, in the conflict with France.

In 1638, John Casimir embarked at Genoa to negotiate an alliance with Philip IV of Spain against France and take up a position as admiral in Spanish service and viceroy of Portugal. However, he was imprisoned by the French upon landing in Marseilles, and remained a prisoner in France until 1640. Seemingly giving up all hopes for a secular career, in 1643 he went to Rome, where in the following year he joined the Jesuit Order. He was appointed cardinal in 1646. However, he renounced this position upon the death of his elder brother, the then King of Poland, Ladislaus IV Vasa (Polish: Władysław; 1595–1648; r. 1632–1648), so that he could stand for election for the Polish throne.

Having been crowned King of Poland in 1649, John Casimir soon married his brother's widow, Marie Louise of Gonzaga (1611–1667; also known as Maria Luisa di Gonzaga-Nevers). Her background was as chequered as



Marie Louise of Gonzaga. (Ferdinand Bol)

his. She was the daughter of Charles, Duke of Nevers and Duke of Mantua. Although born in France and brought up at the French court, she was an Italian by heart. In 1645, she married King Ladislaus of Poland. This was a politically motivated marriage carried out under French pressure. Moreover, since the Polish parliament and clergy reserved the name Marie, or Maria, exclusively for the Virgin Mary, the marriage agreement forced a formal name change, from Marie Louise to Louise Marie. Even so, the marriage was not a happy one, as King Ladislaus was unwilling to give her either his affections or any significant role. Upon his sudden death in 1648, Marie Louise supported the candidature of John Casimir, who promised to marry her in exchange for French support for his candidature. Having become king, he honoured his promise.

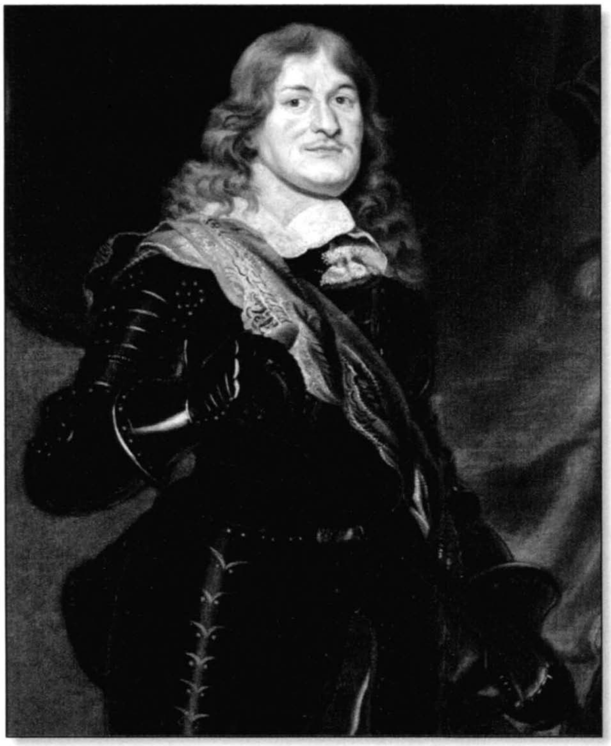
The marriage of King John Casimir and Marie Louise was politically motivated, but the couple had met already in 1640, after John Casimir's release from French captivity. While still in France, he frequently visited Marie Louise and they then corresponded regularly until she married Ladislaus. Their preserved letters give the impression of mutual affection and respect.

John Casimir knew Polish, German, Latin, French, and Italian. Marie Louise knew French and Italian (indeed, her French remained influenced by Italian throughout her life, despite her being born in France). She never mastered Polish, and the couple conversed in Italian. In 1661, Marie Louise founded the first Polish newspaper, *Merkuriusz Polski Ordynaryjny*. She also supported a number of other worthy causes.

There is reason to believe that John Casimir, despite his background which included stints in holy orders, was no fervent Catholic. However, he shrewdly realised that the Catholic faith was a symbol around which a significant number of Commonwealth subjects might rally. It will be shown that he often used Catholic symbols and imagery as means to fan hatred against foreign intruders, be they Swedes, Muscovites, or anybody else.

Polish historians were often unkind to both John Casimir and Marie Louise. The King was often described as weak and indecisive in war and politics and henpecked by Marie Louise, who was called the real power behind the throne. Many assumed that Marie Louise, being a foreigner, put French interests above those of the Commonwealth, and perhaps even more damning, failed to understand and respect the traditional liberties of the Commonwealth nobility. In reality, John Casimir was a competent commander who enjoyed the respect of those of his soldiers who served him directly. While he was not brilliant, neither did he lack talent. As for Marie Louise, she was energetic, strong willed, had a hot temper, and on occasion led men in battle by personal example. John Casimir never gave up womanising, and the couple often clashed on personal or policy issues. Yet, as we have seen, there was genuine affection between them.

Marie Louise suddenly died in 1667. The grief-stricken John Casimir abdicated in 1668, after which he retired to France. He rejoined the Jesuit Order and became abbot of the Abbey of Saint-Germain-des-Prés in Paris. John Casimir and Marie Louise left no surviving children.



Frederick William, Elector of Brandenburg, 1650 or 1651. (Frans Luycx)

Frederick William, Elector of Brandenburg and Duke of Prussia

Frederick William (1620–1688, r. 1640–1688), Elector of Brandenburg and Duke of Prussia, was born in one of the towns which would become Berlin, to George William, Elector of Brandenburg, of the House of Hohenzollern. Upon the death of his father in December 1640, The young Frederick William inherited the Margraviate of Brandenburg, the Duchy of Cleves, the County of Mark, and the Duchy of Prussia. Unfortunately, his German territories were devastated by the Thirty Years' War, since numerous armies repeatedly had marched across them. His first major act of state after assuming power as Elector of Brandenburg was accordingly to negotiate a separate peace with Sweden, the Treaty of Stockholm, which was signed in July 1641. With most of his territories already under Swedish military control, except Prussia which formed part of the Commonwealth and remained under Polish authority, this treaty safeguarded his territory until the end of the Thirty Years' War and the 1648 Peace of Westphalia. In a 1647 agreement with Sweden, Frederick William also acquired Minden, Halberstadt, and Magdeburg, and secured his control over Eastern Pomerania.

Already when young, Frederick William found himself linked to Sweden, in part because Swedish King Gustavus Adolphus was his father's brother-in-law, but also because Swedish armies frequently marched through Brandenburg's territories. Later, Frederick William was educated in the Dutch Republic, including in Leiden and Amsterdam. His experiences there made a great impact on the young prince, and for the rest of his life he regarded the economy and society of the Netherlands as a model to be emulated in his own territories. In 1646 in The Hague, Frederick William entered into an arranged marriage with Luise Henriette of Nassau (1627–1667), daughter of Frederick Henry of Orange-Nassau.

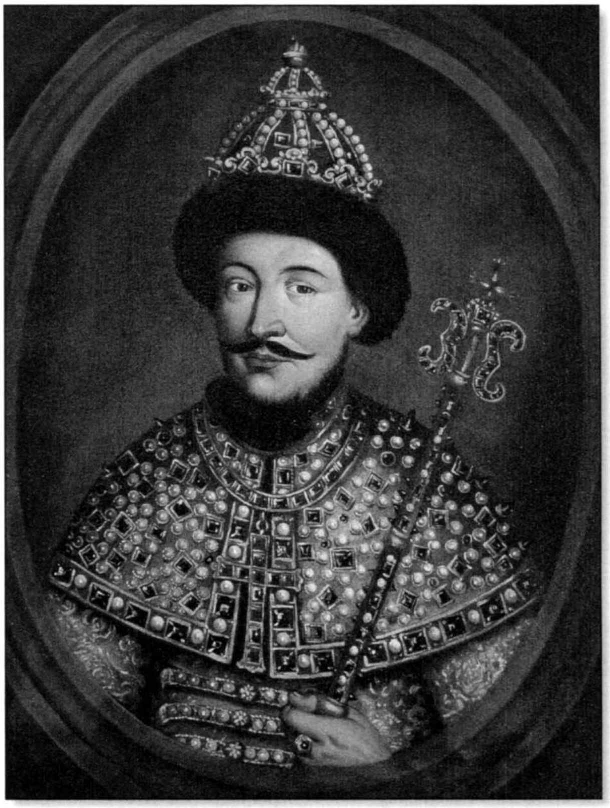
Frederick William was a Calvinist but tolerant of other religious faiths. No doubt because of Brandenburg's unfortunate experiences during the Thirty

Years' War, he based his foreign policy on the principle of safeguarding, and preferably increasing, his own territory. Since this could only be done by military means and through the consolidation of his disparate territories, in hindsight his policies appear opportunistic. So they were, but Frederick William had good reasons to distrust other rulers and their armies.

Alexis I, Tsar of Muscovy

Alexis (Aleksey Mikhailovich; 1629–1676; r. 1645–1676), Tsar of Muscovy and the whole of Russia (*Tsar' vseya Rusi*), was a humane and moderate ruler who laid the ground for many of the achievements of his better-known son and eventual successor, Peter the Great. In the field of military affairs, Tsar Alexis resumed the introduction of Swedish organisation and armaments, which had begun in the reign of his father, and quietly and carefully presided over a military and administrative overhaul of the Muscovite military system, which resulted in the establishment of a modern, standing army based on nationwide conscription.

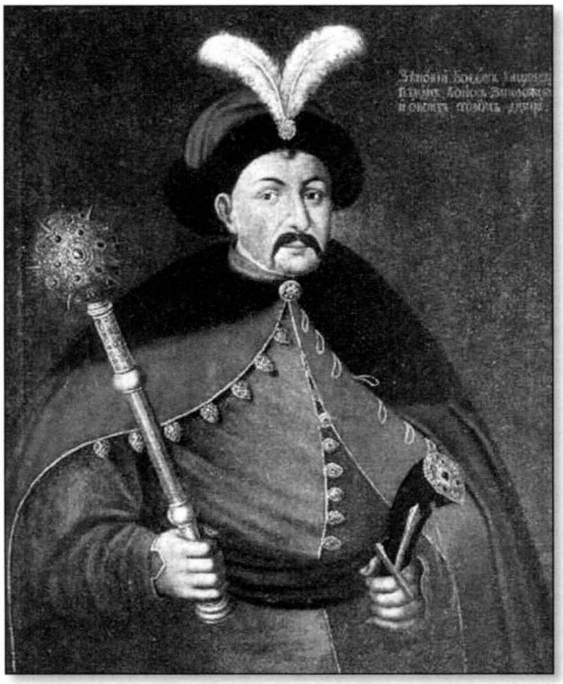
Alexis was a young man at the time of his accession. He accordingly appointed his tutor Boris Morozov, a perceptive noble open to Western European ideas, his chief advisor. This receptiveness to foreign ideas, together with significant personal corruption, eventually caused Morozov's downfall, due to the religious xenophobia that then characterised the Muscovite Orthodox clergy and, in extension, most of the population. For this reason, Tsar Alexis had to tread carefully in his reform work. He stood between those who wanted Muscovy to become part of Europe and those who wished it to remain as in the past. Although he never had the opportunity of gaining a comprehensive education, he read a lot, including translations into Russian of European newsletters, which he ordered his diplomatic service to procure and prepare for him. Alexis attempted to write about his experiences during the war with the Commonwealth, but few of his writings have survived into the present. He was also interested in cyphers.



Tsar Alexis

Tsar Alexis's first marriage, to Mariya Miloslavskaya in 1648, was harmonious and by all accounts happy. She bore him 13 children (five sons and eight daughters) in 21 years of marriage. However, many of the children died young. Two years after Mariya's death Alexis remarried, taking Nataliya Naryshkina as his wife. Their first son was the aforementioned Peter, later known as Peter the Great.

In retrospect, Tsar Alexis comes across as a kind and friendly man, perhaps the most benevolent of Muscovite and Russian rulers. As part of his military reforms, he raised the age of initiation for hereditary military service to 18.[3] Earlier, it had been common for youngsters to enter the army at age 15. He also favoured a more humane application of military punishments. When presented with a suggestion to execute deserters, he replied with the comment that 'it was a hard case to do that, for God has not given courage to all men alike'.[4]



Bogdan Khmel'nitskiy.

Bogdan Khmel'nitskiy, Hetman of Cossack Ukraine

Bogdan Khmel'nitskiy (1595–1657; modern Ukrainian: Bohdan Khmelnytsky), Hetman of Cossack Ukraine, was born into one of the less affluent segments of the Commonwealth nobility. Little definite is known about Khmel'nitskiy's life before 1647. During the subsequent cossack uprising, for political reasons he did not emphasise his noble origin, instead stressing his family's Orthodox background, his mother's (possible) cossack origin and the time his father (likely) spent with the Zaporozhian cossacks. When young, Khmel'nitskiy attended a Jesuit college, although without converting to Roman Catholicism. He completed his schooling in 1617, having acquired a broad general education including Latin and Polish. Later, he learned Ottoman Turkish, Tatar, and possibly French.

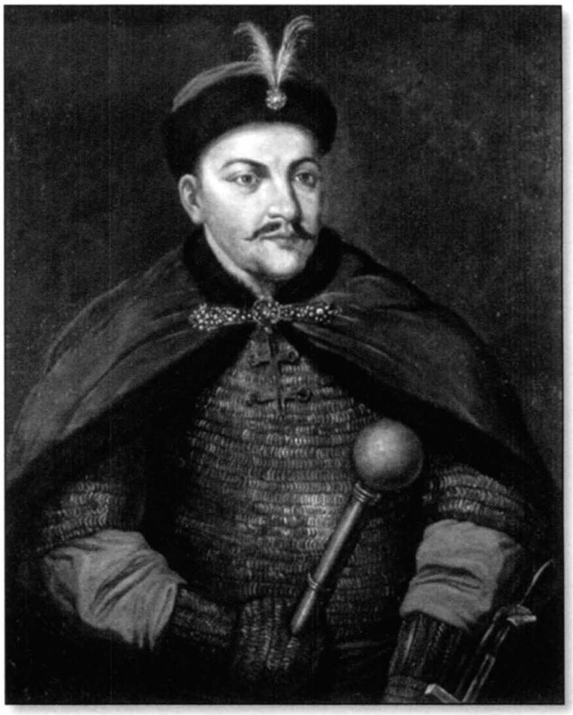
In the 1620s Khmel'nitskiy took part in the wars against the Ottoman Empire. Captured, he spent two years in Ottoman slavery; returning home, he married Hanna Somko and the couple had several children. In 1634, he probably fought in the Smolensk War against Muscovy.

In 1646 a property dispute emerged between Khmel'nitskiy and Aleksander Koniecpolski, a powerful Polish magnate. It seems that Koniecpolski delegated the task to a lesser noble, Daniel Czapliński, who ultimately sent men to attack Khmel'nitskiy and his family. In 1647 Khmel'nitskiy was evicted from his land. However, he then served as a captain (*sotnik*) in a registered cossack formation,

---

[3] I.D. Belyayev, *O russkom voyske v tsarstvovaniye Mikhaila Feodorovicha i posle ego, do preobrazovaniy, sdelannykh Petrom Velikim: Istoricheskoye izsledovaniye* (Moscow: Universitetskaya tipografiya, 1846), p.26.

[4] Anon. [Samuel Collins], *The Present State of Russia* (London: John Winter, 1671), p.110. Collins spent nine years in Muscovy as the personal physician of Tsar Alexis. His final observation on the Tsar is worth repeating, not so much for what it says about him as for what it says about Collins's understanding of the contemporary world: '... without doubt this present Emperour of Russia is as pious, conscientious, clement, merciful and good a Prince as any in the world. As for his People and Ministers of State, they are like other Nations, ready to act any thing for Bribes or Money, and to deceive as many as they can.' *Ibid.*, p.125.



Yuriy Khmel'nitskiy

the Chigirin Regiment. He brought a significant number of his men to the estuary of the Dnieper, where he persuaded the Zaporozhians to elect him their Hetman. Taking advantage of widespread discontent with Commonwealth rule among the cossacks, Khmel'nitskiy then initiated the 1648 cossack uprising.

While the immediate cause for Khmel'nitskiy's rebellion was certainly his treatment during the property dispute, and the negative outcome, the widespread discontent among the Orthodox population in Ruthenia (modern-day Ukraine and Belarus) was real enough. For this reason, Khmel'nitskiy soon received the allegiance of many cossacks and peasants but also some minor nobles who like himself had an Orthodox background and resented Commonwealth rule.

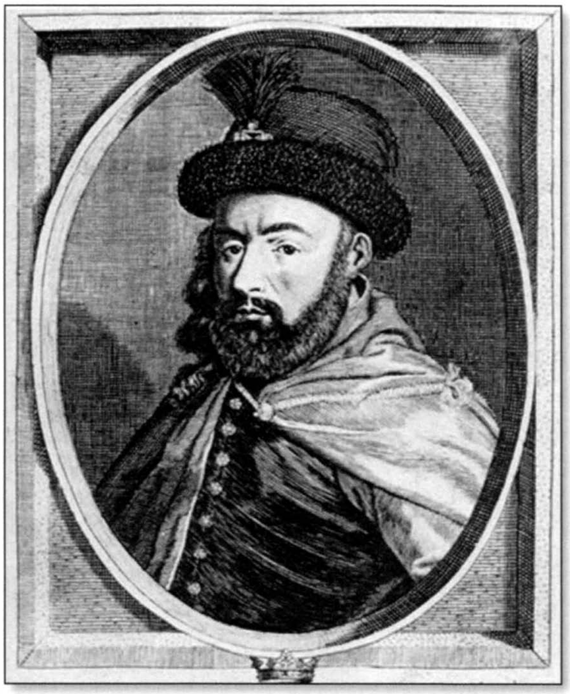
The role played by Khmel'nitskiy's personal skills in the emergence of a Ukrainian state cannot be overemphasised. In many ways, he not only initiated the cossack uprising, he also organised the loose cossack bands into first an army, and then a state. It is fair to say that he built Cossack Ukraine from scratch.

Khmel'nitskiy also attempted to establish a dynasty. Before he died, he arranged to have his son **Yuriy Khmel'nitskiy** (1641–1685) proclaimed Hetman of Cossack Ukraine after him. The son was notably less skilled as a leader and statesman than his father.

George II Rákóczy, Prince of Transylvania

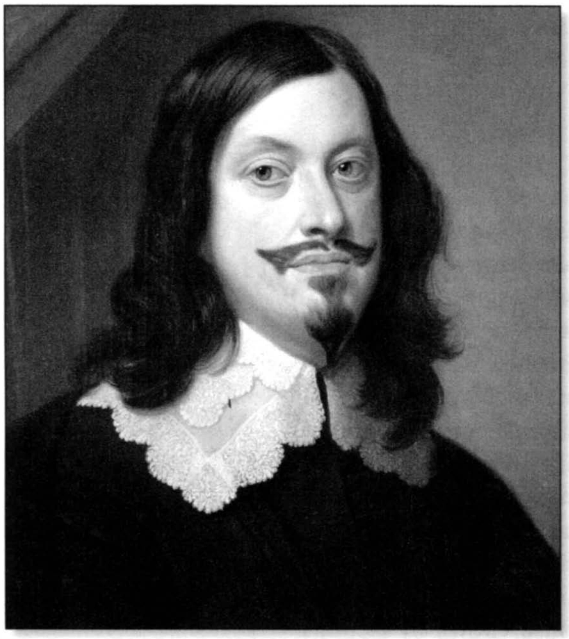
George II Rákóczy (Hungarian: Rákóczi György II; 1621–1660; r. 1648–1657 and 1659–1660), Prince of Transylvania, was the eldest surviving son of George I, who ruled before him as Prince of Transylvania.

In 1643, Prince George married Sophia Báthory, a descendant of the Hungarian noble family from which had emerged Stephen Báthory who in 1576 was elected King of Poland and Grand Duke of Lithuania. As part of the marriage agreement, Sophia converted from Roman Catholicism to Calvinism, the faith of her husband. During the Thirty Years' War, George I had allied with Sweden and France against the Empire. When the Polish throne in 1648 fell vacant after the death of King Ladislaus IV he tried, but failed, to make himself King of Poland. His son, Prince George, wanted to realise his late father's ambitions in the Commonwealth. During the ongoing conflict there, he was more than once offered the Polish Crown by factions of Commonwealth nobles. He was on friendly terms with both Swedes and Khmel'nitskiy's cossacks. Regarding himself as clearly eligible for the throne due to his and his wife's descent, Prince George continued on his father's path.



Above: George II Rákóczy

Below: Ferdinand III, 1643. (Jan van den Hoecke)



Transylvania was a vassal state of the Ottoman Empire. As a result, Prince George was unable to follow a fully independent foreign policy. He had to secure Ottoman approval before major policy decisions.

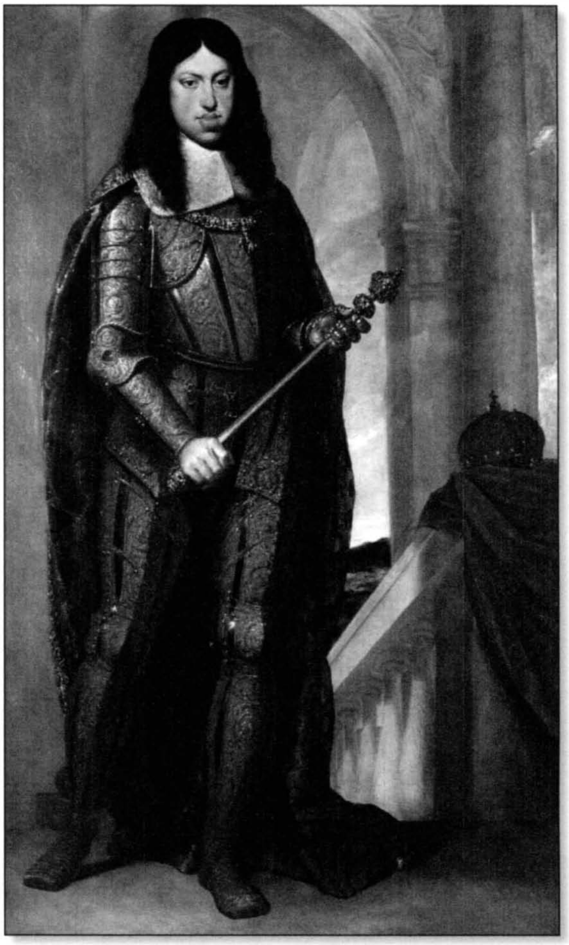
Ferdinand III, Emperor of the Holy Roman Empire of the German Nation

Ferdinand III (1608–1657; r. 1637–1657), Emperor of the Holy Roman Empire of the German Nation, was a man of diverse talents. As a young man, Ferdinand had been a military commander. He was designated commander-in-chief of the Imperial army in 1634 and held command in several battles, including that of Nördlingen in 1634, in which a combined Spanish–Imperial army inflicted a major defeat on the Swedes, which for a while forced them to abandon southern Germany.

Ferdinand was also a musical composer of some note. He studied music under the famous Venetian composer and virtuoso Giovanni Valentini, and was a close friend of Johann Jacob Froberger, a composer of significant musical influence. Some of Ferdinand's own compositions survive in manuscripts: mostly masses, motets, hymns and other sacred music, but also a few secular pieces.

As befitted an emperor of the Holy Roman Empire, especially one of the House of Habsburg, and in similarity to his father, Ferdinand was a devout Catholic. However, even though at an early age he had received religious and scholarly training from Jesuit teachers, he did not give the Jesuits at court the same level of influence as they had enjoyed under his father.

The Swedish victories in the Commonwealth in 1655 brought Swedish armies to the border with Silesia, Moravia, and Hungary – which formed part of the Habsburg hereditary lands (German: *Erbländer*) and constituted the primary source of their material and economic influence. Swedish control over Polish territories just across the border made these lands vulnerable to attacks from the east. Habsburg feelings were not only a reflection of the losses in the Thirty Years' War; the Emperor knew that France, under the foreign policy of Cardinal



Leopold I, in coronation armor 1658. (Attributed to Pietro Liberi or Guido Cagnacci)

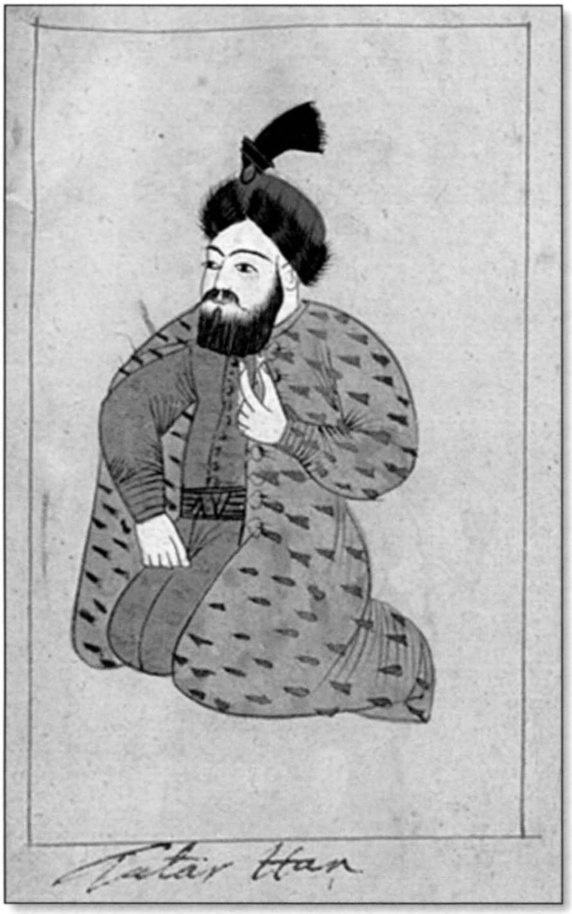
Jules Mazarin (1602–1661), wished for Swedish support in the Empire, to prevent the resumption of the anti-French alliance between the Austrian and Spanish Habsburgs. For the Emperor, the Swedish presence in Poland was a clear and present danger, and he was prepared to employ military means to remove the threat.

When Emperor Ferdinand decided to go to war against Sweden in support of the Commonwealth, he did not, in a judicial sense, act in his capacity as Holy Roman Emperor. Sweden was, through its German territories, an Estate of the Empire, with the right to admission to the Imperial Parliament (*Reichstag*). Moreover, Sweden had not attacked any Imperial territory, and the Emperor could not alone declare war in the name of the Empire. For this reason, Emperor Ferdinand declared war in his capacity as Archduke of Austria and, primarily, through his son and emperor-elect Leopold (1640–1705; r. 1658–1705), who was King of Hungary. Moreover, the Emperor was reluctant to support King John Casimir's hope for a direct attack on Swedish Pomerania, since this would be a breach of the Peace of Westphalia and accordingly risked reigniting the Thirty Years' War. However, the judicial details of the war caused some concern, since Leopold also, since 1654, held the title of King in Germania, which Sweden took as cause for a formal diplomatic protest. Moreover, the Hungarian Estates declined to support a war with Sweden, which made the employment of Hungary as a pretext for war untenable. Ultimately, the judicial squabbling did not matter. The Emperor sent his army to war despite the protests.

The army which Emperor Ferdinand had at his disposal was the Imperial army, or at least those components of it which belonged to the Habsburg hereditary lands. For this reason, we will still refer to it as the Imperial army, despite the contemporary diplomatic fiction that it was Hungary which went to war against Sweden.

Ferdinand was in 1658 succeeded as Emperor by his son **Leopold I**, who was already crowned King in Germania, King of Hungary, and King of Bohemia and in 1657 added the titles King of Croatia and Slavonia as well as Archduke of Austria to his existing titles. Leopold lacked his father's military experience but shared his talent for music.

Mehmed IV Geray, Khan of the Crimean Khanate



No contemporary depiction of Mehmed seems to have been preserved. However, this drawing from an Album of Costumes acquired in Constantinople in 1657-1658 by Claes Brorson Rålamb, the Swedish envoy to Ottoman Sultan Mehmed IV and to the Sublime Porte, purports to depict the Khan of the Crimean Khanate. He is dressed in a green dolama, brocaded sash, pale blue overgarment, and a fur-edged, red four-cornered cap in Tatar style.

The Crimean Khanate was ruled by **Mehmed IV Geray** (1610–1674; r. 1641–1644 and 1654–1666).[5] Mehmed was a gifted ruler whose policies ensured that the Khanate always ended up on the winning side, regardless of the fortunes of war. However, the Crimean Khanate was a client state of the Ottoman Empire, to which it was bound by treaty, and it was the Ottomans who decided which member of the illustrious Geray lineage would rule the Crimean Tatars. As a result, the two reigns of Mehmed were interrupted by that of his elder brother Islam III Geray (1604–1654; r. 1644–1654).When Islam died of natural causes, Mehmed was recalled from exile on the island of Rhodes and reinstated as Khan.

Mehmed was one of the most well-known poets of the Khanate, writing under the pseudonyms of Kamil and Khani. Like his people, he was a Muslim. We have no information on his piety, or lack thereof. However, most of his poems were of a philosophical or religious nature, the latter imbued with the mysticism that characterised Sufi Islam, so we know that Mehmed was in no way a fanatic. Although little is known of his personal interests, he comes across as a cultured person. Fated to serve the Ottomans as a client ruler, he handled foreign and domestic policy well. Yet, his options were always limited due to his status as a client.

During the time of the Deluge, Mehmed chose to join forces with the Commonwealth. However, a previous khan of the Crimean Khanate, Janibeg Geray, had in 1629–1632 attempted to negotiate an alliance with Swedish King Gustavus Adolphus, and following the death of Swedish King Charles X in 1660, Mehmed entertained plans to negotiate a new alliance with the latter's son and successor Charles XI, in this case against Muscovy with which Sweden was then still at war.

---

[5] Because of past changes in pronunciation, the influence of Ottoman Turkish spelling conventions, the peculiarities of the Arabic alphabet, and the twentieth-century development of several new Tatar alphabets based on Roman letters, there are multiple ways of spelling Tatar names. Names such as Geray or, with an alternative spelling, Ghirai (but also Noghai, Manghit, and so on) were of Mongol origin but by this time were pronounced in Turkicised form and written with Arabic letters. The Mongol origin was Karay, and since sixteenth-century Muscovite chronicles occasionally use the variant Kirey, the Turkicised form had apparently not yet fully departed from the original. In modern Crimean Tatar, the form commonly used is Geray, which is the one adopted here. When pronounced, the stress falls on the second syllable.

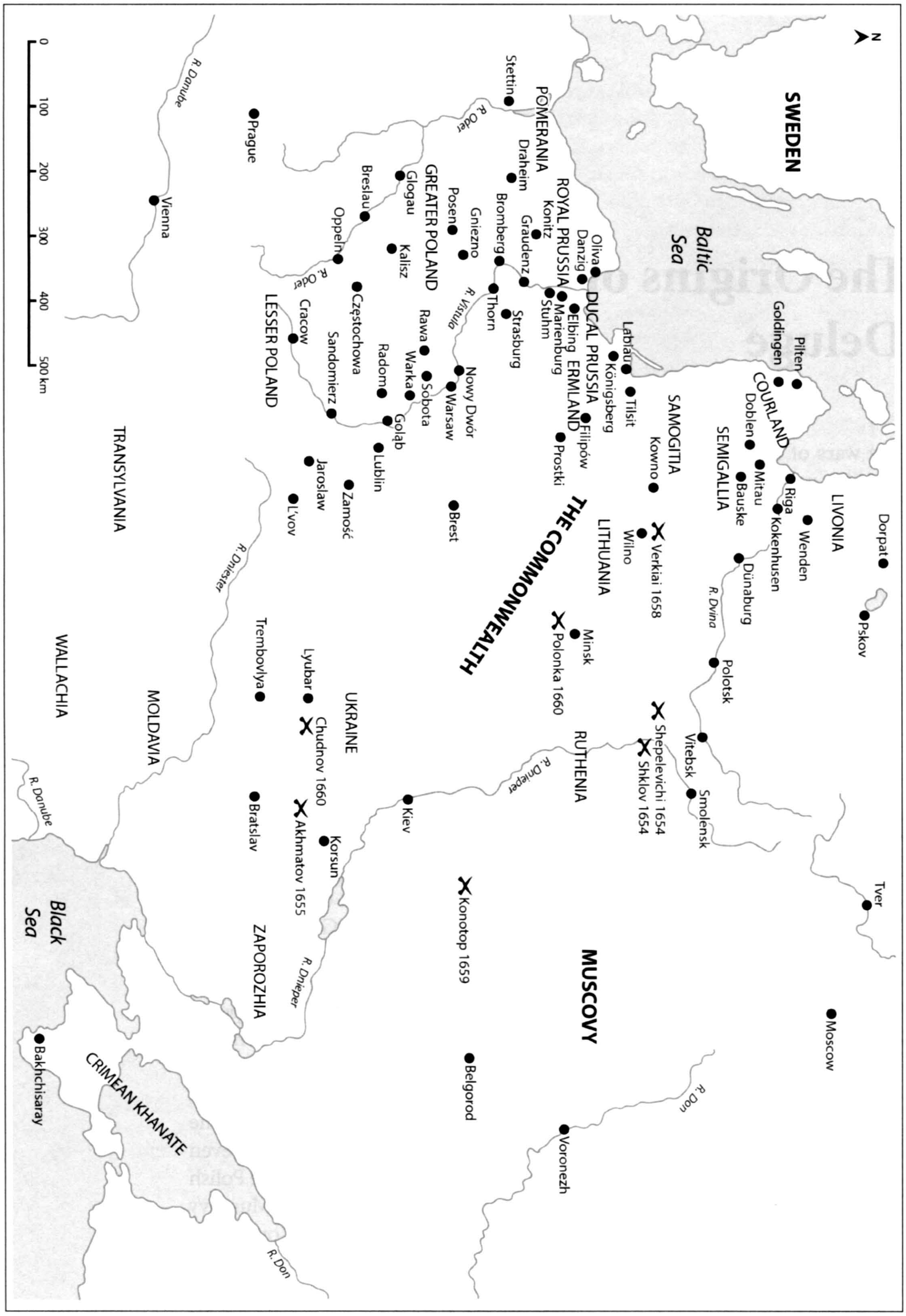
Mehmed was the last Khan of the Crimean Tatars who attempted to follow a truly independent foreign policy. He could not help being the ruler of an Ottoman client state; however, he was not so acquiescent as to put the Ottoman objectives above those of his Tatars. Following Mehmed's second and final deposition in 1666, his successors learnt the lesson and proved more docile vassals of the Ottoman Empire.

1

The Origins of the Swedish Deluge

The wars of the Swedish Deluge had complex origins. They did not begin in 1655, nor did military action during this decade at first involve Sweden. The Polish–Lithuanian Commonwealth (the *Rzeczpospolita*), formally known as the Crown of the Kingdom of Poland and the Grand Duchy of Lithuania, had been at war with Sweden since 1598 because of a persistent dynastic conflict between different lines of the Swedish Vasa dynasty. And military operations had already begun in 1654 when Muscovy invaded the Commonwealth in what subsequently became known as the Thirteen Years' War. This 'Muscovite Deluge' was unconnected to Sweden, and before the Swedish Deluge was over, Muscovy had declared war on Sweden, too.

Oddly, most historians still treat the Deluge, the Thirteen Years' War, and the war between Muscovy and Sweden as separate conflicts, even though they involved the same participants, took place at the same time, and at least in part were fought over the same territory. There were other contenders as well. The War of the Swedish Deluge involved eight mutually hostile sovereigns – the two Vasa kings, the Tsar of Muscovy, the Elector of Brandenburg, the Prince of Transylvania, the Hetman of Cossack Ukraine, the Khan of the Crimean Tatars, and the Emperor of the Holy Roman Empire of the German Nation, as its full name went – who all fought for control, in part or in full, of the Commonwealth's Crown, territory, and resources. While the Emperor of the Holy Roman Empire, eager for a rematch against Sweden after the Imperial defeat in the recently concluded Thirty Years' War, did not have a personal stake in the war, he nonetheless sent an expeditionary force in aid of the Commonwealth for geopolitical reasons. The Elector of Brandenburg fought to enhance his own domain. The Prince of Transylvania joined forces with the Swedish King because his father had done so in the Thirty Years' War, but even more so because Commonwealth representatives had promised him the Polish throne. Incidentally, they had also promised the throne to the Tsar of Muscovy, and to a host of other foreign dignitaries. The Ukrainian cossacks, or at least most of them, fought for freedom from what they perceived as the oppression of the Commonwealth, while the Tatars fought to preserve the status quo and to take captives to sustain the slave trade on which their economy depended.


N
SWEDEN
Baltic Sea
LIVONIA
Dorpat
Pskov
Tver
Moscow
Pilten
Goldingen
COURLAND
Doblen
SEMIGALLIA
Mitau
Bauske
Riga
Wenden
Kokenhusen
Dünaburg
R. Dvina
Polotsk
Vitebsk
Smolensk
SAMOGITIA
Kowno
Tilsit
Königsberg
Labiau
Verkiai 1658
Wilno
LITHUANIA
Minsk
Polonka 1660
Shepelevichi 1654
Shklov 1654
RUTHENIA
R. Dnieper
MUSCOVY
Konotop 1659
Belgorod
R. Don
Voronezh
POMERANIA
Stettin
R. Oder
Draheim
ROYAL PRUSSIA
Konitz
Graudenz
Oliva
Danzig
DUCAL PRUSSIA
Elbing
ERMLAND
Marienburg
Stuhm
Strasburg
Filipów
Prostki
THE COMMONWEALTH
Bromberg
Thorn
R. Vistula
Gniezno
Posen
GREATER POLAND
Glogau
Kalisz
Breslau
Oppeln
Częstochowa
Rawa
Warka
Sobota
Nowy Dwór
Warsaw
Radom
Gołąb
Sandomierz
Lublin
Cracow
LESSER POLAND
Brest
Jaroslaw
Zamość
L'vov
Prague
Vienna
R. Danube
TRANSYLVANIA
R. Dniester
WALLACHIA
MOLDAVIA
Trembovlya
Lyubar
UKRAINE
Chudnov 1660
Akhmatov 1655
Korsun
Kiev
Bratslav
ZAPOROZHIA
R. Dnieper
R. Danube
Black Sea
Bakhchisaray
CRIMEAN KHANATE
R. Don
0
100
200
300
400
500 km

The Commonwealth

The Ukraine

The principal cause of the wars of the Deluge was the turbulent situation among the Ukrainian cossacks. These cossacks lived on the steppe and forest steppe north of the Black Sea known as the Ukraine ('borderland'). This was a region of mixed grassland and woodland in which the major rivers simultaneously provided the primary communication routes and constituted the principal obstacle to overland travel, since they often were too deep and wide to be forded. The 'borderland' had long been inhabited, but since it now formed the border between the Commonwealth, Muscovy, the Ottoman Empire, and the Crimean Khanate, it also attracted large numbers of adventurers, disaffected peasants, fugitives from justice, and fundamentally anybody in search of better opportunities. They coalesced around a number of cossack communities which emerged simultaneously in the southern territories of Muscovy and the Commonwealth. Making a living from herding, fishing, some farming, and raiding, these communities were little more than temporary camps, protected by wooden palisades, in a generally lawless region. Even so, the Zaporozhian cossacks on the River Dnieper had already in the sixteenth century established a settlement that can only be called a proto-state. However, these cossack settlements, as well as the rest of the Ruthenian Orthodox population in the region, which lived in older and generally walled towns such as Kiev, gradually fell under the control of first the Grand Duchy of Lithuania, and then the Kingdom of Poland.

Being of the Orthodox Christian faith and speaking a language quite different from either Polish or Lithuanian, the Ukrainian cossacks had long resented being under the dominion of the Commonwealth. So did the Ruthenian peasantry, from whom many cossacks derived. Ruthenia was a Latin term derived from Rus' (the same word which ultimately transformed into Russia). By tradition, Ruthenia was divided into White Ruthenia (the eastern part of modern-day Belarus and the source of the name Belarus – White Russia), Black Ruthenia (earlier a part of Poland but currently the western part of modern-day Belarus), and Red Ruthenia (the former principality of Galicia and the western parts of modern-day Ukraine and south-eastern Poland), the chief city of which was L'vov. When the Commonwealth was formally established by the Union of Lublin in 1569, the Crown of Poland gained control of most of Ruthenia, which by then was divided into voivodeships (provinces) like the rest of the Commonwealth. Thus, the Commonwealth acquired several Ruthenian voivodeships including those of Galicia, Volhynia, Podolia, Bratslav, and Kiev which together eventually became known as the Ukraine.

In Bogdan Khmel'nitskiy's 1648 Ruthenian uprising, the Ukrainian-Ruthenian cossacks and peasants slaughtered their own gentry and those of the Commonwealth who fell into their hands, but also anybody deemed a Catholic or Jew. The Commonwealth forces retaliated in kind. Like most popular uprisings, it was a bitter and sordid affair. However, the strategic context of the uprising was far from commonplace. Realising that his army was too small to resist the Commonwealth and simultaneously protect the Ruthenian population from the slave raids customarily carried out by the

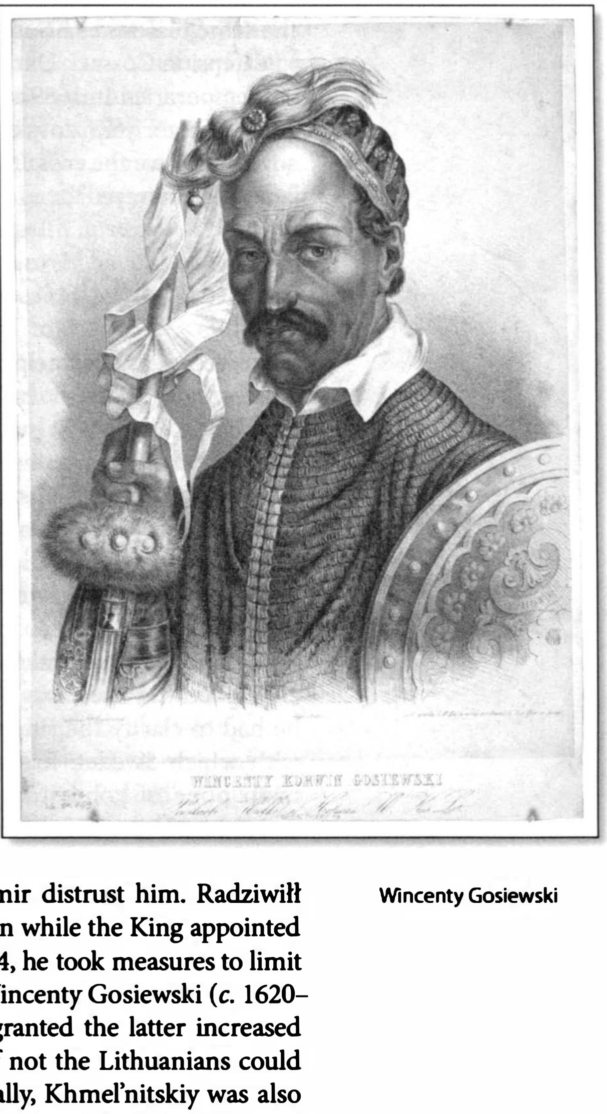
Crimean Tatars, Khmel'nitskiy before initiating the uprising travelled to the Crimea, requesting an alliance with the Khan of the Crimean Khanate. Pledging allegiance to the Khan, and leaving his son behind as hostage, Khmel'nitskiy received the Khan's agreement to send a Tatar army, under Mirza Toghai Bey (*c.* 1601–1651), in support of the cossacks. The Ottoman Sultan sanctioned the agreement later in the year (Khmel'nitskiy had also sought direct support from the Ottoman Empire, but he received no recognition from that side).

Although Khmel'nitskiy's name remains celebrated as that of the shaper of modern-day Ukraine, few today remember Mirza Toghai Bey. Yet, it was Toghai Bey and the Crimean Tatars who played the decisive role in Khmel'nitskiy's early victories against the Commonwealth (at Zholtyye Vody, Korsun', and Pilyavtsy in 1648, Zbarazh and Zborov in 1649, and eventually Batog in 1652). In the first battles, the Crimean Tatars outnumbered both Khmel'nitskiy's small corps of cossacks and their Commonwealth opponents, who in addition had failed to anticipate the Tatar presence. Without the Crimean Tatars, the cossack uprising would almost certainly have been crushed already in 1649. Yet, pledging allegiance to the Khan of the Crimean Tatars brought unintended consequences. Having answered Khmel'nitskiy's pleas for support, the Khan regarded Khmel'nitskiy and his cossacks as subjects, not allies. This was not what Khmel'nitskiy wanted, so in 1650 he instead approached Muscovy for assistance. Although the cossack cause received some popular support in Muscovy, Tsar Alexis held back, guided by caution. Khmel'nitskiy's situation grew yet more desperate following the decisive Commonwealth victory over the cossacks at Berestechko in 1651, when the cossacks suddenly found themselves without Tatar support. Khmel'nitskiy was not out yet, however, and in 1652 a joint army of Crimean Tatars and cossacks destroyed the Polish Crown army at Batog.

Khmel'nitskiy then again commenced negotiations with Moscow. This time, Tsar Alexis was more amenable. In January 1654 Khmel'nitskiy signed the Treaty of Pereyaslav, in which he dropped his fealty to the Khan and instead acknowledged the Muscovite Tsar as his suzerain. In return, Moscow recognised Khmel'nitskiy's territory, which included Kiev, Bratslav, and Chernigov, as independent but under Moscow's suzerainty. For Muscovy, this was less a means to acquire new territories in the Ukraine than an opportunity to sever Khmel'nitskiy's dependency on the Tatar Khan, for whom slave raids into southern Muscovy were equally attractive as slave raids into the Commonwealth. Muscovy had, at great cost, built the defensive Belgorod Line (*Belgorodskaya cherta*) as a fortified zone to protect southern Muscovy from Crimean Tatar intrusions. Yet, if Tatar vassals such as Khmel'nitskiy held Kiev, a Crimean army could bypass the Belgorod Line altogether, moving straight into Muscovy's southern heartlands. In short, Moscow wanted Khmel'nitskiy's cossacks as a buffer against the Tatars, not as Tatar vassals during future raids into Muscovy.[1]

---

[1] Before Tsar Alexis decided to accept Khmel'nitskiy's pleas and initiate preparations for the war with the Commonwealth that would be the inevitable outcome of such a decision, Khmel'nitskiy's chancellor, Ivan Vygovskiy, in several letters to the Tsar and not very subtle terms argued that



Wincenty Gosiewski

The Khan of the Crimean Khanate learnt of Khmel'nitskiy's ongoing negotiations with Muscovy already before the Treaty was agreed and correctly regarded them as a betrayal, since the cossack Hetman already had sworn allegiance to the Crimean Khanate. Promptly abandoning combat operations against the Commonwealth at the battle of Zhvanets, the Khan on 16 December 1653 agreed to a separate truce with the Commonwealth, in return for King John Casimir's promise to resume the customary tribute gifts, to which the Khanate was entitled in its role as a successor of the Mongol Empire.[2]

While it seems certain that Khmel'nitskiy genuinely hoped that Muscovy would recognise and protect his position, the uncertain status of his cossack territories meant that Khmel'nitskiy had to conduct a very agile foreign policy. In addition to his relationships with the Crimean Khanate, the Ottoman Empire, and Muscovy, Khmel'nitskiy attempted to gain support from Transylvania and Moldavia, two Ottoman vassal states. Furthermore, he worked to gain the support of Janusz Radziwiłł (1612–1655; Lithuanian: Jonušas Radvila), the Grand Hetman of Lithuania. Radziwiłł was a Lithuanian and a Calvinist, either of which made King John Casimir distrust him. Radziwiłł was also one of Lithuania's greatest magnates.[3] Even while the King appointed Radziwiłł Grand Hetman of Lithuania in June 1654, he took measures to limit his power, The King appointed Radziwiłł's rival Wincenty Gosiewski (*c.* 1620–1662), a Polish Catholic, as Field Hetman, and granted the latter increased autonomy.[4] Khmel'nitskiy must have wondered if not the Lithuanians could be enticed into an alliance against the Poles. Finally, Khmel'nitskiy was also in touch with the Elector of Brandenburg and the King of Sweden, for much

---

Muscovite suzerainty and military support constituted the only way to save the cossacks from forced participation in the Khan's planned attack on southern Muscovy. Brian L. Davies, *Warfare, State and Society on the Black Sea Steppe, 1500–1774* (Abingdon, Oxon: Routledge, 2007), p.107.

[2] Because the Crimean Khanate, founded by a Mongol prince in 1441, was a successor state of the Mongol Empire established by Genghis Khan in the early thirteenth century, both the Commonwealth and Muscovy by tradition owed the Khanate customary tribute. Most Commonwealth and Muscovite rulers sent the tribute without objections, since not doing so invariably invited retaliation.

[3] Janusz Radziwiłł was an educated man who knew Polish, Ruthenian, Lithuanian and Latin. He had participated in the Smolensk War as a staff officer and later commanded the army against the Ukrainian cossacks but, in similarity to many Commonwealth nobles, had comparatively limited experience of modern warfare.

[4] Robert I. Frost, *After the Deluge: Poland-Lithuania and the Second Northern War, 1655-1660* (Cambridge: Cambridge University Press, 2003), p.33.

the same reasons as his negotiations with other powers.[5] Khmel'nitskiy's, and in extension Cossack Ukraine's, opportunistic foreign policy was noted by his contemporaries. In 1659, after yet another switch in allegiance, the exasperated Prince Grigoriy Kozlovskiy, a Muscovite representative, exclaimed: 'To what sovereign have the cossacks not appealed? To whom have they not submitted – and then betrayed?'[6]

Sweden and the Commonwealth

For Sweden, the principal cause of the Deluge was the dynastic dispute between the Swedish and Polish branches of the House of Vasa. When King Charles in 1654 succeeded Queen Christina as ruler of Sweden, he immediately faced several challenges. With regard to foreign policy, he had to secure the Swedish gains on the Continent. This was an urgent need, since the city of Bremen refused to accept Swedish suzerainty under the 1648 Peace of Westphalia (a legally complex issue which for some months in 1654 resulted in a state of war between the city and Sweden[7]). At the same time, he needed to keep an eye on Denmark, which was eager for revenge to recover its territorial losses in the 1645 Treaty of Brömsebro which had concluded the latest war between the two countries. But yet more urgently, he had to clarify the situation with the Polish–Lithuanian Commonwealth, with which Sweden had been at war for more than half a century. The main bone of contention was dynastic. The descendants of Polish King Sigismund Vasa (1566–1632) refused to abandon their claim to the Swedish throne, from which Sigismund had been deposed, ostensibly because of his Catholic beliefs, by his uncle Charles IX, who was the father of King Gustavus Adolphus (1594–1632). Both Sigismund and Gustavus Adolphus belonged the Swedish House of Vasa. So did King Charles – but only on his mother's side. Sigismund's son John II Casimir Vasa, King of Poland and Grand Duke of Lithuania, could indeed be said to have a better claim to the Swedish throne. In part because of this dynastic rivalry, the Commonwealth refused to agree to a proper peace treaty with Sweden. King John Casimir retained his demand for the Swedish throne and also demanded the return of Livonia. He refused to surrender either without territorial compensation from Sweden or political concessions from his own parliament, neither of which was forthcoming.

At first, the enduring state of formal war with the Commonwealth was not a major concern for King Charles. A truce had been negotiated in

---

[5] King Charles on 12 October 1655 (O.S.) wrote that the cossacks had sought his protection. J. Levin Carlbom, *Tre dagars slaget vid Warschau den 18, 19 och 20 juli 1656: Samt de föregående mindre fältslagen 1655 och 1656 – Ett tvåhundrafemtioårigt minne* (Stockholm: Varia, 1906), p.21.

[6] Davies, *Warfare, State and Society*, p.114.

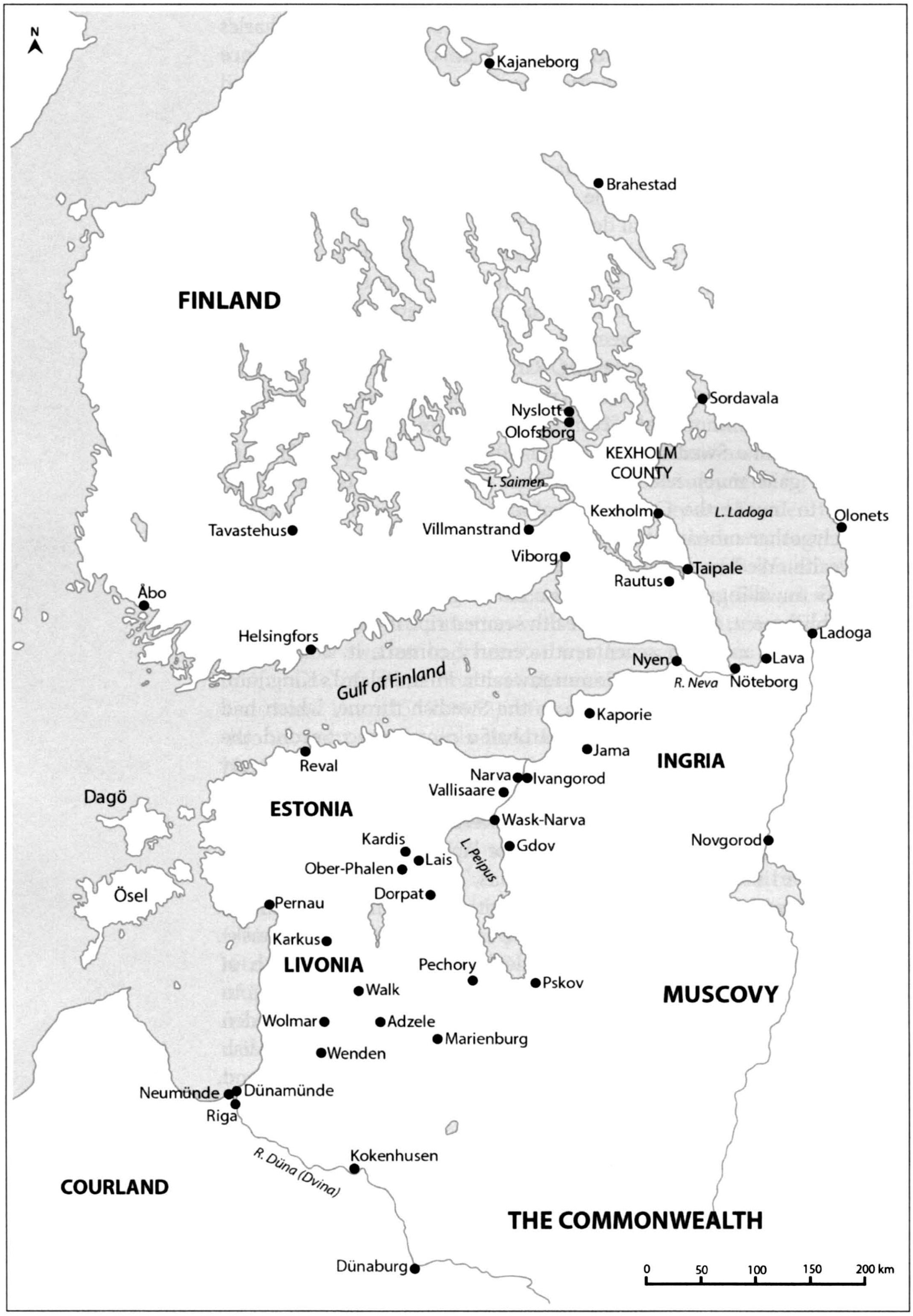
[7] The issue did not go away. As late as in 1666, war again broke out between Bremen and Sweden. Bremen had no means to win the war, but this time the city won the peace negotiated later in the year. By then, Bremen, enjoyed the support of a coalition consisting of the Netherlands, Denmark, Brandenburg, and Lüneburg. The city of Bremen was henceforth recognised as under Imperial, not Swedish, suzerainty.

Stuhmsdorf in 1635 and remained in force. In fact, at first King Charles contemplated a joint Swedish–Commonwealth attack on Muscovy, since the Commonwealth and Muscovy already were at war, and he regarded Muscovy as a long-term threat to Swedish territory as well. However, the Commonwealth was uninterested in such an alliance, since King John Casimir refused to recognise King Charles as ruler of Sweden. Rebuffed, King Charles decided to invade the Commonwealth instead. Historians argue over when he took the final decision, but it surely happened between late January 1655, when the arrival of a Commonwealth envoy to Stockholm merely confirmed King John Casimir's refusal to negotiate, and mid April, when Sweden issued mobilisation orders. Some point in February or March seems most likely. Expecting the Commonwealth eventually to collapse under the Muscovite onslaught, King Charles wanted to pre-empt any Muscovite expansion to the Baltic shore. Besides, a settlement of the existing Swedish–Commonwealth conflict was long overdue. Moreover, in the Commonwealth a Swedish army could support itself, and the Swedish Crown might gain much-needed additional revenues. Facts considered, the decision to invade the Commonwealth was rational on all accounts. Unfortunately, other monarchs had equally rational reasons to invade the Commonwealth. Weakened from its numerous internal divisions and the ruling strata's unwillingness to modernise either government structure or military establishment, the Commonwealth seemed ripe for the taking.

On the surface and in a seventeenth-century context, it was easy to justify Sweden's new attack on the Commonwealth. First, Poland's King John Casimir refused to surrender his claim to the Swedish throne, which had caused the war in the first place, more than half a century ago. Second, the Commonwealth was patently unwilling to negotiate a proper peace treaty to replace the 1635 Truce of Stuhmsdorf between the Commonwealth and Sweden, which would lapse in 1661. But there were ulterior motives as well. This is unsurprising, since the truce would not lapse for another six years, which gave ample time for continued negotiations. The primary objective was to conquer Courland, the coastal areas of Samogitia (modern-day Žemaitija), and Prussia, including the important port of Danzig (modern-day Gdańsk). Stockholm may have hoped to gain Brandenburg's remaining stretch of land in Pomerania as well. The acquisition of these territories would join the Swedish overseas possessions in the north and south and give Sweden control over the Baltic Sea. It would enable easy redeployment of Swedish armies from Swedish Pomerania to Livonia, Estonia, Ingria, and Finland, and vice versa.[8] It would enable additional and better naval bases than those which already existed. But yet more importantly, it would allow Sweden to control the important trade routes across the Baltic Sea, and to impose tolls on this trade. Sweden already controlled the centres of trade in the northern

---

[8] Sweden and Finland constituted the same country. Its provinces and peoples had the same rights and obligations. Hence, any reference to Swedish soldiers, nobles, and so on, can be assumed also to include those from Finland, unless stated otherwise. By this time, the Swedish territories in Germany, Livonia, Estonia, Ingria, and Kexholm County also formed part of the Swedish kingdom and its inhabitants were subjects of the Swedish Crown.


N
Kajaneborg
Brahestad
FINLAND
Nyslott
Olofsborg
KEXHOLM COUNTY
L. Saimen
Sordavala
Kexholm
L. Ladoga
Olonets
Tavastehus
Villmanstrand
Viborg
Taipale
Rautus
Åbo
Ladoga
Helsingfors
Nyen
Lava
R. Neva
Nöteborg
Gulf of Finland
Kaporie
Jama
INGRIA
Reval
Narva
Ivangorod
Vallisaare
Dagö
ESTONIA
Wask-Narva
Gdov
Kardis
Lais
L. Peipus
Novgorod
Ober-Phalen
Ösel
Dorpat
Pernau
Karkus
LIVONIA
Pechory
Pskov
Walk
MUSCOVY
Wolmar
Adzele
Marienburg
Wenden
Neumünde
Dünamünde
Riga
R. Düna (Dvina)
Kokenhusen
COURLAND
THE COMMONWEALTH
Dünaburg
0
50
100
150
200 km

Livonia, Estonia, Ingria, Kexholm County, and Finland.

Baltic and, in Germany, controlled the estuaries of the Rivers Oder, Elbe, and Weser. What remained to complete the picture was to take control over Memel (modern-day Klaipėda) and Pillau (modern-day Baltiysk), from which the trade with Lithuania flowed, and Danzig, Elbing (modern-day Elbląg), and Putzig (modern-day Puck), which dominated the trade along the River Vistula and thus Poland. Chief among these mercantile centres was Danzig, which enjoyed a somewhat independent status due to its wealth and large population. It has been estimated that the Greater Danzig region, that is, the territory under the city's direct control, at this time had around 77,000 inhabitants, more than any Swedish city. A conquest of Danzig would have made it the jewel of the Swedish Crown.[9]

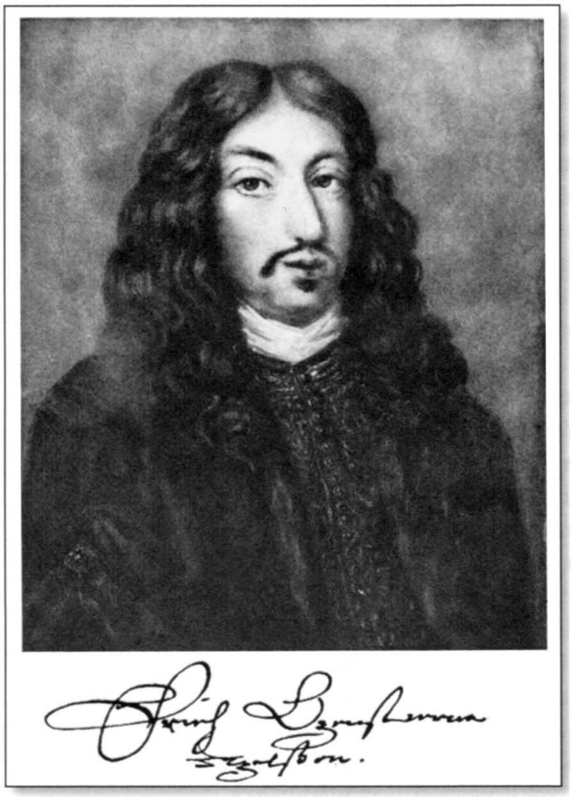
Yet, the desire for expansion and future gain was not the only Swedish goal. Muscovy had the potential to upset the Swedish plan. In 1654, the Tsar's army had already advanced deep into the Commonwealth, and the Muscovite successes in Lithuania made both Courland and Samogitia vulnerable. Stockholm assessed that Tsar Alexis wanted to gain control of parts of the same Baltic shore that Sweden coveted. It would not do to allow the Tsar to gain these territories before Sweden secured them. Moreover, there was the lingering worry that Tsar Alexis also might covet Swedish Livonia, where Swedes and Muscovites had clashed in the sixteenth century. King Charles had no desire to go to war with Muscovy, but neither would he allow the Tsar to take what he wanted for himself. Sweden had no territorial demands on Muscovy. The last war with Muscovy had ended in the days of Swedish King Gustavus Adolphus with the 1617 Treaty of Stolbovo, in which Sweden returned the occupied Novgorod, received Kexholm County and Ingria, but renounced its claims to the Muscovite throne and recognised Michael Romanov as Tsar. With Kexholm County and Ingria, Sweden already controlled the territories that enabled a favourable border with Muscovy. Moreover, since 1617 relations had been good between Sweden and Muscovy, which indeed supported Sweden during the Thirty Years' War. In this spirit, King Charles issued directives to avoid strife with Muscovy and disregard minor insults and border incidents.

The Assessment of the Swedish Council of the Realm

Swedish foreign policy was not a matter for the King alone but something to be determined in consultation with the Council of the Realm (Swedish: *Riksrådet*), which was composed of the senior officials of the country (and any decision to go to war then had to be ratified by parliament). In late 1654, the Council of the Realm agreed that Sweden faced potential or actual threats on three sides. Denmark wanted revenge and did not attempt to hide its desires. The Commonwealth refused to negotiate a peace treaty, as long as this entailed the abandonment of King John Casimir's claim to the Swedish throne. Muscovy had grown stronger than in the past and seemed to aim for a slice of the Baltic

---

[9] Michał Salamonik, *In Their Majesties' Service: The Career of Francesco De Gratta (1613–1676) as a Royal Servant and Trader in Gdańsk* (Huddinge: Södertörn University, dissertation, 2017), p.61.



Erik Oxenstierna, 1650.

coastlands, which constituted either a direct or indirect threat to Swedish interests, depending on which territory Tsar Alexis had in mind. As a result, the Council of the Realm in December 1654 after careful deliberations decided that it was necessary to mobilise. Mobilisation would not be a problem in itself. Sweden already had a standing army, and additional units could be enlisted on the Continent. However, the problem was how to feed the army when it had been raised. Ever since the days of King Gustavus Adolphus, the Swedes knew that the only way to afford the maintenance of the military establishment which was needed to preserve security was to move the army abroad, where it could supply itself from enemy territory. Per Brahe, the Lord High Justiciar (*Riksdrots*), summarised the problem: 'If we raise six or seven German regiments, besides our own military – and we could scarcely do with less – and then leave them unoccupied, it will be as good as making war upon ourselves: we must consider how much will have been wasted on maintaining them!'[10]

In the continuing discussion, council member Christer Bonde summarised the strategic outlook:

> First, it may be true that Denmark is not arming, but all the same the Danes are steadily building up their navy, and it is already quite formidable. Second, the agreement between Denmark, the Commonwealth and the Dutch to arm their ships in the Baltic looks suspicious. Third, the alliance between the Netherlands and Denmark is directed against us. Denmark is jealous of us because we possess almost all the harbours in the Baltic, and hence her Sound Tolls are diminished, not to mention the fact that by trading ourselves we exclude the commerce of other nations who would have paid toll. The Dutch are jealous of our power, and because our trade is increasing ... even though they fear that we would ally with England against them.[11]

Everybody within the Council knew that the Netherlands was more than twice as strong in naval power as Sweden, but they also knew that England was substantially increasing its naval strength and was in the process of surpassing the Netherlands.[12]

---

[10] *Svenska riksrådets protokoll* 16 (Stockholm: RA, 1923), pp.2–36 (8–12 December 1654 O.S.), on p.5. This work reprints the minutes of the Council of the Realm. Translation into English based on the excerpts in Michael Roberts, *Sweden as a Great Power 1611–1697: Government; Society; Foreign Policy* (London: Edward Arnold, 1968), pp.163–9.

[11] *Ibid.*, pp.6–7.

[12] By 1655, England had 133 warships, while the Netherlands had 101. In comparison, Sweden had 41, Denmark 28, and France only 23. Jan Glete, *Navies and Nations: Warships, Navies and State Building in Europe and America, 1500–1860*, vol. 2 (Stockholm: Almqvist &Wiksell International,

At this point, the Lord High Chancellor (*Rikskansler*), Erik Oxenstierna (1624–1656), interjected: 'There is something in that; but we have in fact no information that Denmark is concerting measures with the Commonwealth or the Netherlands to arm in the Baltic. The King of Denmark's interest, like ours, is to keep any foreign war fleet out of the Baltic.'[13]

Per Brahe then noted:

> We cannot blame the Danes for wanting to build up their fleet. We shall always be capable of dealing with them, and there seems no immediate danger from that quarter. The Netherlands has been weakened by England, and by internal dissension. There is currently more danger from Muscovy ... But Denmark lies as it were between Germany, the Netherlands and England, and none of these would wish to see her ruined. Denmark has many friends in the Empire ... The case would be altered, of course, if Denmark were attacked by some other power, and its destruction seemed imminent: in that case we might do well to grab a bit for ourselves, like everybody else ... The Commonwealth seems to be in danger of that kind at this moment.[14]

Having pondered the strategic situation without reaching a unanimous conclusion on whether it was Denmark or Muscovy which posed the most urgent risk, the Council moved to the question of where to deploy the troops after mobilisation. Soon, Oxenstierna summarised the discussion: 'I take it that we are all agreed to adhere to the proposal that we should arm; that we do it with a view to the war between the Commonwealth and Muscovy; and that it is there that the troops are to be employed.'[15]

Per Brahe added:

> I am afraid that it begins to look as though the Commonwealth is too weak to resist the Muscovite attack for long. And it is a matter of concern to us that the whole Commonwealth shall not fall into the hands of the Muscovites. It might not be a bad thing to avail ourselves of their predicament, and tell the Poles plainly that there are unsettled controversies between us, that they have done this and this contrary to the armistice agreement; and now that they are heavily engaged with the Muscovites, which is a matter we are interested in ourselves; then they must just agree to a reasonable settlement with us, or be prepared for our taking our cut, just as the Muscovites do. If we then reach a settlement, although it seems unlikely ... we could on certain terms agree to come to the Commonwealth's rescue; but if we do not, then it would be best to use the time and opportunity. In this way we could either help her or skelp her, according to how she behaved.[16]

Acta Universitatis stockholmiensis (Stockholm Studies in History) 48:1, 1993), p.550 (England), p.575 (France), p.596 (Denmark), p.607 (Sweden), p.639 (Netherlands).

[13] *Svenska riksrådets protokoll*, pp.16, 7.

[14] *Ibid.*, p.7.

[15] *Ibid.*, p.8.

[16] *Ibid.*, p.9.

In short, Brahe argued for offering the Commonwealth a peace treaty, on terms favourable to Sweden, in return for which a Swedish army would assist the Commonwealth against the Muscovites. But he also made an emotional argument, reminding the Council:

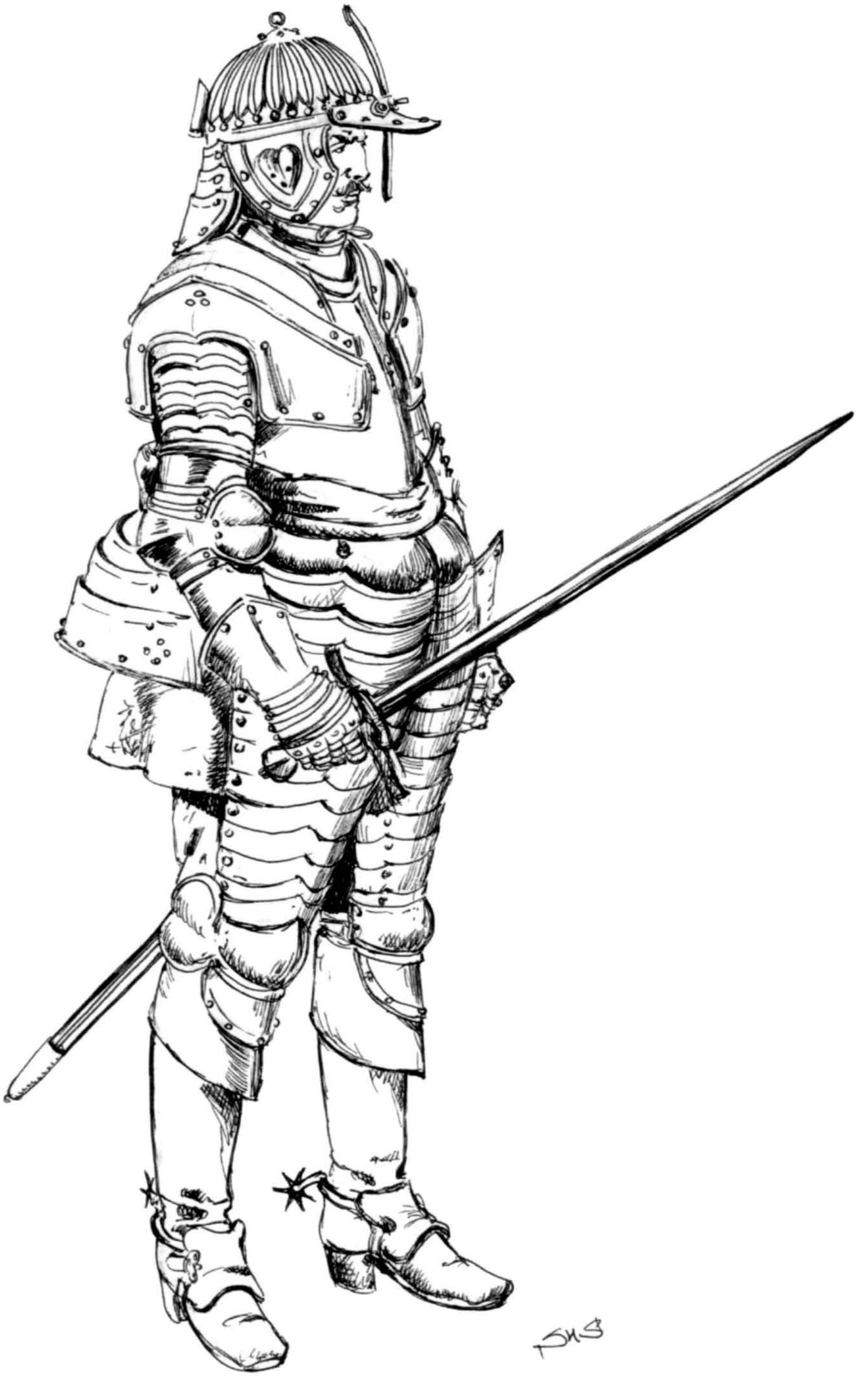
> how profitable our wars have been to us. And now our armies are ageing, our generals are getting old and dropping off; and we know, from the scantiness of our resources, and the warlike temper of our nation, what it was that prompted the expeditions of the ancient Goths to other lands. Such reasons as these – if the cause were good – are arguments enough for arming.[17]

Three days later, the discussion continued. Brahe reminded the others that 'one of two things could happen: either that the Commonwealth and Muscovy reconcile and join forces to attack us; or that the Commonwealth might succumb entirely. We must be prepared for either outcome ... It would certainly be a good thing to dispose of Denmark once for all. But at the moment it does not seem that there much risk from that quarter, nor ... any just cause of war.'[18] Bonde, in turn, noted that 'as soon as we engaged ourselves against the Commonwealth, Denmark and the Netherlands would join forces against us.'[19] Oxenstierna, however, reiterated the point that there was not yet any just cause for war with Denmark. Moreover, he added that a war with Denmark 'would not be without considerable difficulties. We know what a job we had with Denmark last time, when we had the Netherlands on our side; and how would it be now?'[20] In the subsequent vote, the Council unanimously voted for mobilisation. However, it was evident that opinions were divided in regard to whether Denmark or Muscovy posed the greater threat. Ultimately, the Council left this decision to King Charles. Even so, Oxenstierna noted that the situation in the Commonwealth was the most urgent to deal with.[21]

King Charles did not participate in the debate, perhaps because he wanted the Council to unite behind an argument for war on its own so that it could not back down later. Because the conclusion was clear: Sweden would go to war against the Commonwealth, in part to force a favourable peace treaty with King John Casimir, and in part to pre-empt any Muscovite expansion to the Baltic shore. Neither King nor Council wanted a war with Muscovy, but pre-emption seemed to be a working strategy. This should not be interpreted as King Charles neglecting the threat from Denmark. To the contrary. Before he became king, he had fought in Denmark under Field Marshal Torstensson, and in a letter, he then expressed his hope that the war would help 'weed out the Danish nation, this plague on universal and communal harmony' (*pour exstir per ceste nation Danoise, peste d'une tranquillité universelle et*

---

[17] *Ibid.*, p.11.
[18] *Ibid.*, p.16.
[19] *Ibid.*, p.18.
[20] *Ibid.*, p.19.
[21] *Ibid.*, p.25.



German or Livonian cavalryman in Commonwealth service at the outbreak of war. Armed and equipped for the previous war, this cavalryman will soon abandon most of his armour and probably acquire a more modern rapier as well. (Illustration by Sergey Shamenkov) *commune*).[22] While Charles discussed the threat posed by the Danish state, we can assume that his views also reflected the traditional enmity between Danes and Swedes. The enmity was also perhaps reflected in the choice of words. When discussing Danish kings, Swedes often referred to them as Jutes, not Danes.

The minutes of the Council of the Realm's discussions show with abundant clarity that the Swedish leaders regarded Denmark, not the Commonwealth, as the primary threat. If the Commonwealth had not been intractable in its refusal to negotiate a peace treaty to end the decades-long war, and had Muscovy not so effectively moved into Lithuania, no Swedish Deluge would have taken place. Furthermore, it seems unlikely that Muscovy would have moved against the Commonwealth at this particular time, had Moscow not already found itself involved on the side of Khmel'nitskiy's uprising in the Ukraine. All these wars were interlinked, and if there was a root cause, it lay in the Ukraine.

---

[22] Charles to Axel Oxenstierna, 31 December 1643; cited in Hilding Rosengren, *Karl X Gustaf före tronbestigningen: Pfalzgrefven intill tronföljarvalet 1649* (Uppsala University, dissertation, 1913), p.166.

2

The Swedish Military Establishment

Interestingly for a mid-seventeenth century conflict, the eight countries which were the main contestants in the wars of the Deluge each had a uniquely different military system. Not only tactical doctrines, but also means of raising troops and basic military organisation, differed considerably. So did, although to a more limited extent, arms, armour, and equipment.

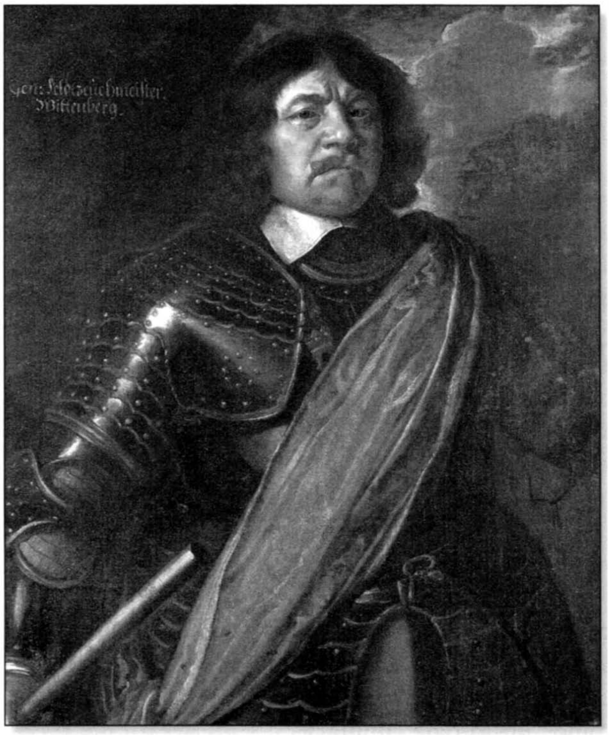
Sweden had the arguably most modern and up-to-date military establishment, if for no other reason than its innovations during the previous war were copied by most adversaries. The systems and organisations already put in place to raise the Swedish army during the Thirty Years' War remained in operation and continued to function for the duration of King Charles's reign.[1] King Charles did not aim to change either organisation or tactics from those he had seen, with his own eyes, perfected in the previous war.

The Swedish army remained a well-trained, professional, and very disciplined military force. Swedish soldiers entered battle with the expectation to win, even against superior odds. In part the effect of professionalism, indoctrination, and the memory of conquests in the Thirty Years' War, the expectation of victory was perhaps even more the product of the strict, even ruthless, discipline enforced within the army. The Articles of War of the late King Gustavus Adolphus still regulated Swedish military life.[2] It was forbidden, on pain of death, to desert, or not to fight to the end for

---

[1] For further details, see Michael Fredholm von Essen, *The Lion from the North 1: The Swedish Army during the Thirty Years' War, 1618–1632* (Warwick: Helion, 2020); Michael Fredholm von Essen, *The Lion from the North 2: The Swedish Army during the Thirty Years' War, 1618–1632* (Warwick: Helion, 2020).

[2] Gustavus Adolphus, *Krijgz articlar, som fordom then stormechtigste furste och herre, herr Gustaff Adolph, then andre och store, Sweriges, Göthes och Wendes konung, storfurste til Finland, hertig vthi Estland och Carelen, herre vtöfwer Ingermanland, &c. loffwerdigst i åminnelse hafwer låtit göra och författa, Anno M. DC. XXI* (Stockholm: Ignatio Meurer, 1621). Although dated 1621, when the Articles of War were issued, this print edition was published after Gustavus Adolphus's death. The King's handwritten draft version of the Articles is reprinted in Gustavus Adolphus, 'Utkast till Krigs-Artiklarna, utfärdade den 15 juli 1621', C.G. Styffe (ed.), *Konung Gustaf II Adolfs skrifter* (Stockholm: P.A. Norstedt & Söner, 1861), pp.243–53.


Arvid Wittenberg, 1649. (Matthäus Merian the Younger)

the unit's standard (Article 58). Whoever first ran away from battle would forfeit his life. If he evaded capture, he would publicly be declared a scoundrel and outlaw (Article 64). It was forbidden for a unit to flee from the battle as long as their weapons could still be used. If it was the officers who were responsible for the flight, the officers would be deemed to have lost all honour and be dismissed from the camp. If the fault belonged both to officers and men, the officers would be punished as mentioned while every tenth soldier, drawn by lot, would be hanged. The survivors then had to serve without standard, sleep outside the camp quarters, and were detailed for cleaning duties in the camp (Articles 61, 62, 63). It was also forbidden, on pain of death, to surrender a bastion or redoubt until one had already endured three attempted storms, there was no hope for help, and the men faced certain death (Article 66). Likewise, if the soldiers forced a commandant to surrender a fortress, all officers and under-officers who supported the proposal would be executed, while every tenth soldier would be hanged (Article 74).

There were also rules to regulate interaction with civilians. In the initial stages of the Deluge, the Swedish army operated under the severe discipline of the Articles of War, enforced by Field Marshal Arvid Wittenberg (1606–1657). Wittenberg, a veteran of the Thirty Years' War who had distinguished himself in the second battle of Breitenfeld 1642 and in the battle of Jankow 1645, knew how to maintain discipline in an unruly army. During the approximately six-week march from Stettin to Konin, the enlisted Scotsman Patrick Gordon (1606–1699) noted that Wittenberg had no less than 470 soldiers executed, sometimes for what Gordon considered trivial offences, such as the soldier who stole some milk from a local peasant. When the peasant's wife reported the theft, Wittenberg promptly had the soldier identified and hanged.[3] However, in the later stages of the war, when contributions and supplies had to be taken by force, there was little money with which to pay the men's wages, and civilian resistance increased, discipline grew significantly laxer. Even so, the deterioration in discipline was not for lack of trying. In 1656, King Charles issued an updated version of the 1632 edition of the Articles of War.[4]

---

[3] Patrick Gordon, *Tagebuch des Generalen Patrick Gordon, während seiner Kriegsdienste unter den Schweden und Polen vom Jahre 1655 bis 1661, und seines Aufenthaltes in Rußland vom Jahre 1661 bis 1699* (Moscow: Prince M.A. Obolenskiy and M.C. Posselt, 1849), pp.17–18.

[4] Printed 1657 by Amund Grefve, Gothenburg.

Tactical Doctrines

The Swedish model as established by the late King Gustavus Adolphus was a combined arms model, in which the key arm, the infantry, acted in unison with the cavalry and field artillery. Gustavus Adolphus aimed for a combination of hitting-power, mobility, and defensive strength. Hitting-power was achieved through firepower (musketeers and regimental artillery) in combination with shock (charging pikemen and cavalry). Mobility was assured by the army's superior organisation and training. The army's defensive strength was the result of the combination of hitting-power and mobility, since it allowed the army to close with the enemy rapidly and thus avoid excessive losses from the opponent's firepower.

The Swedish model remained unchanged during the reign of King Charles. Because of the increased focus on cavalry first in the latter stages of the Thirty Years' War, and even more so, in the kind of warfare engaged in while on campaign in the Commonwealth, the ratio of cavalry to infantry grew in the Swedish army. However, the combined arms model remained essentially unchanged.

Cavalry Tactics

During the early stages of the Thirty Years' War, Gustavus Adolphus attempted to increase the cavalry's firepower by attaching platoons with musketeers to the cavalry units. This was a new solution to the problem of combining firepower, mobility, and defensive capability. Unfortunately, the joint cavalry–musketeer formation had a serious flaw: the infantry musketeers could not move as fast as the cavalry. As a result, after the death of Gustavus Adolphus, his general Bernard of Saxe-Weimar changed the tactical doctrine introduced by the Swedish King. He retained many aspects of the Swedish model, including its aggressive aspects, but ordered his cavalry to charge at the gallop, independent of infantry support.[5] Bernard later went into French service, where he recommended the adapted tactical doctrine to Henri de La Tour d'Auvergne, Viscount of Turenne, who then served under him. Turenne referred to this type of cavalry charge as in the Swedish manner (*à la suèdoise*) and advocated the doctrine in France.[6]

However, in central and eastern Europe, cavalry grew increasingly independent in operations. The share of cavalry within the army grew, and cavalry became the primary offensive arm. This trend was obvious already during the Thirty Years' War and continued during the Deluge. Soon, a whole army might consist of cavalry alone. The trend grew yet stronger during the wars of the Deluge. As a result, the question of how to combine shock and firepower in a cavalry context re-emerged. The solution became to attach not infantry but dragoons to the cavalry units. Henceforth, many cavalry regiments included an attached company of dragoons or two. As a result, in the mid seventeenth century the cavalry regained its former position as the premier arm. Besides, the importance of both cavalry and dragoons grew in relationship to the increasing scarcity of supplies in the theatre of operations. Only horse had the required mobility to cover sufficient distances to find the increasingly scarce supplies that remained available. This was particularly true of operations within the Commonwealth. Yet, in full-scale battles, the cavalry horses constituted a limiting factor. Most could not carry on for more than four or five hours before they needed rest. Moreover, it was not always easy to replace lost horses. The army in the Commonwealth and elsewhere on the Continent often faced shortages in cavalry horses.

---

[5] Ebbe Gyllenstierna, 'Karl Gustav Wrangel och Henri Turenne: Svensk och fransk krigföring under trettioåriga krigets sista skede', *Meddelande* 36 (Stockholm: Armémuseum, 1976), pp.39–51, on p.47.

[6] Turenne later recommended the doctrine to a young Swedish officer, Nils Bielke, who together with the experienced Rutger von Ascheberg in 1676 reintroduced it in the Swedish army, with considerable success (and, incidentally, called it a charge in the French manner, *à la française*). Michael Fredholm von Essen, *Charles XI's War: The Scanian War between Sweden and Denmark, 1675–1679* (Warwick: Helion, 2019), p.18.

Infantry Tactics

Swedish infantry tactics had changed little since Gustavus Adolphus. The Swedish model continued to emphasise the offensive. Pikemen and musketeers remained arrayed in no more than six lines, with the pikemen in the centre. The musketeers were trained to fire in volleys (salvoes), several ranks at a time. Following a volley, the pikemen would charge the enemy.

Yet, the share of pikemen in the army fell, and organisation was simplified, for practical reasons but also to accommodate soldiers who were less well trained and disciplined in comparison to previous Swedish armies. Over time, this resulted in an increased focus on infantry firepower, which came to reduce the previous emphasis on the shock provided by charging pikemen. The infantry then became a defensive arm, and it was up to the cavalry to charge the enemy. Infantry might, for instance, disperse caltrops in areas where they wanted to thwart enemy cavalry operations. Dispersing caltrops on the ground took little time, and one of the caltrop's spikes would always point upwards. They were particularly effective against horses but would slow down infantry, too. Yet, this reduced the offensive potential of the infantry. Over time, the infantry began to be seen primarily as a stable base around which the cavalry could operate in set battles. This role became particularly important during operations in the Commonwealth, since most opponents were cavalry. Even so, infantry was always needed to lay siege to towns and fortresses, and to man them afterwards.

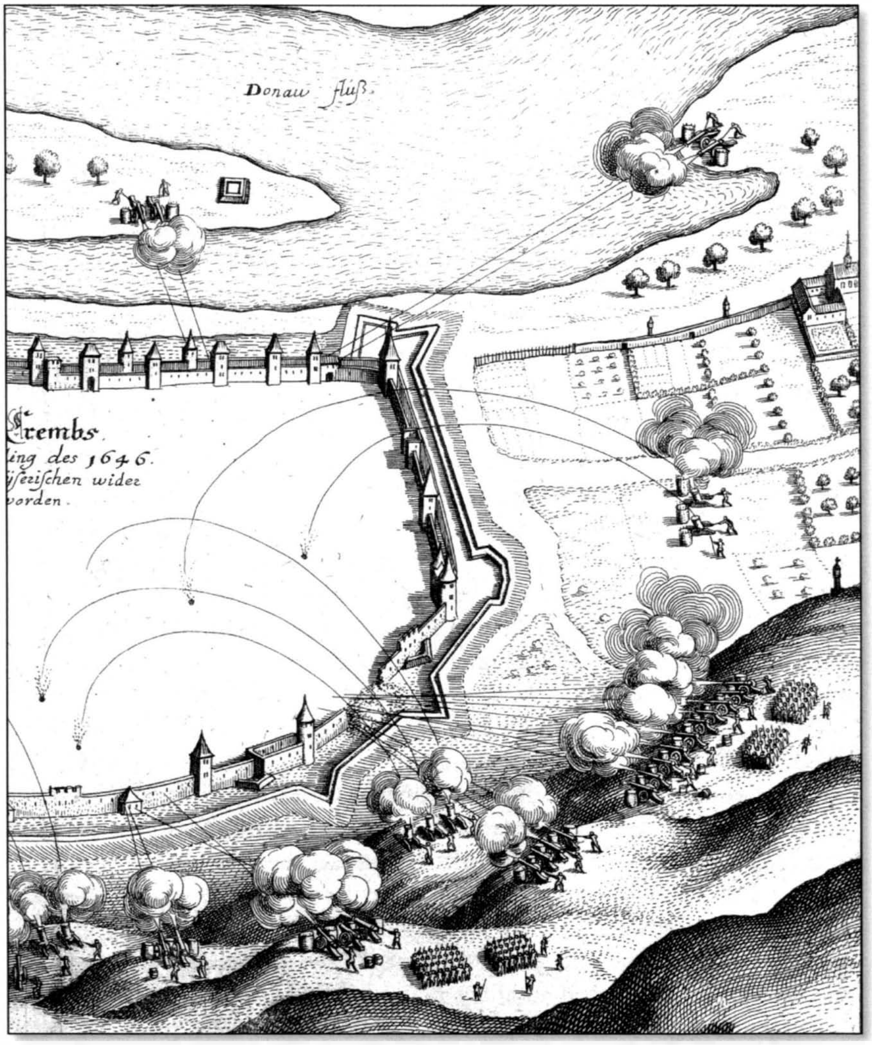
Later in the century, Swedish tactical doctrine for the infantry would again emphasise the offensive, and to an even greater extent than under Gustavus Adolphus. At the time, offensive tactics would be reintroduced by officers who had served in the Thirty Years' War.[7]

Artillery Tactics

The Swedish field artillery, and in particular regimental artillery, reached its peak performance in the Thirty Years' War under the artillery expert Field Marshal Lennart Torstensson. Under his guidance, the field artillery was

---

[7] *Ibid.*, p.128.



Imperial siege artillery in action against the town of Krems-an-der-Donau, Lower Austria, 1646. During sieges Imperial artillery, too, deployed in multiple ranks when the terrain permitted.

characterised by mobility and independence, which was fully developed in the 1645 battle of Jankow, where the efficient use of artillery seems to have been a decisive factor in the Swedish victory. At Jankow the Swedish artillery was constantly in play, moving from location to location and deploying in various formations. The regimental cannons retained their importance in the Swedish army. They were deployed in conjunction with the units which they were designated to support, either in front of or between units. Regimental cannons were frequently deployed on the flanks so that they could support their unit with flank fire.

Torstensson also improved the heavy artillery. By reducing the weight of the gun carriages and adding more draught horses to the teams, he significantly increased the mobility of heavy cannons. For instance, 24-pounders were moved by transporting the cannon barrels and carriages separately, each drawn by more than 20 horses, and then joining them together on the chosen site. Under normal conditions, the heavy artillery deployed in batteries before or immediately behind the first line, or alternatively between the battalions or occasionally on the flanks. When terrain allowed, the artillery deployed in double ranks, the rear rank firing above the lower rank deployed in front.[8] Presumably, the regimental cannons formed the lower rank, while the heavy artillery was deployed at some distance behind and above them. During sieges, the artillery even deployed in three ranks, each above the other.[9] Deployment in this manner also protected the heavy artillery from counter-fire, since most artillery employed direct fire only and enemy artillery fire thus was less likely to hit the upper ranks.

Against cavalry, the most commonly employed projectile was the explosive grenade. Against other targets, round shots were employed, so that the shot after landing would continue on its course bouncing through several enemy ranks.

Organisation and Training

The cavalry consisted of men raised from administrative units each of which was referred to as a cavalryman's holding (*rusthåll*), which consisted of one or more farms which individually or collectively contracted to support a cavalryman. The cavalry was organised into provincial regiments according to where it was raised. The infantry consisted of conscripted troops, but like the cavalry organised into provincial regiments according to where they were raised. In addition, the Swedish military made considerable use of enlisted units, both horse and foot, primarily from the Continent but also from other parts of Europe. They were organised and trained similarly to the national units. The artillery consisted of enlisted professionals.

National Regiments

In the latter half of the Thirty Years' War, the national regiments of the army consisted of 23 provincial infantry regiments (14 in Sweden and nine in Finland) and eight provincial cavalry regiments (five in Sweden and three in Finland). To this can be added the Retinue of Nobles, which was based on the feudal duties of the nobility but essentially functioned like any other cavalry unit. Then, in 1646, following the incorporation into Sweden of the formerly Norwegian provinces of Jämtland and Härjedalen, a new provincial infantry regiment known as the Ångermanland Regiment was raised in the three provinces of Ångermanland, Medelpad, and Jämtland. This raised the number of national infantry regiments to 24. To this can be added yet another infantry regiment, His Royal Majesty's Life Guard, which was enlisted throughout the realm. Finally, in 1653 or 1654, a dragoon regiment originally enlisted in Finland in the final years of the Thirty Years' War was incorporated among the national provincial regiments: the Karelian Dragoon Regiment. However, Finland was also the home of an independent

---

[8] Raimondo Montecuccoli, *Ausgewählte Schriften*, vol. 2 (Vienna: Kriegs-Archiv/W. Braumüller, 1899), p.580.

[9] Jonas Hedberg (ed.), *Kungl. Artilleriet: Yngre vasatiden* (Stockholm: Militärhistoriska Förlaget, 1985), p.262.

Viborg Battalion, consisting of four companies of foot which had been retained in addition to the three existing provincial regiments in Viborg County (Karelia).[10]

The national regiments are noted in order of seniority in Table 1 (tables are located at the end of the chapter).

Enlisted Regiments

When King Charles came to power, the army also included three enlisted regiments of foot. Two regiments, each of six companies, were deployed in Bremen-Verden: the late William Forbes's Regiment and Bengt Horn's Regiment. Both currently lacked colonels.

More prominent was the aforementioned His Royal Majesty's Life Guard of Foot (more commonly known, in German, as the *Leibregiment* and, in English, as the Life Regiment), which primarily was deployed in Riga and also functioned as a training establishment for officers. In 1654 King Charles appointed Christoph Carl von Schlippenbach (1624–1660), a Courlander, colonel of the Life Guard. Schlippenbach only seldom commanded the Life Guard, however, since he was soon dispatched on a series of diplomatic missions. The Life Guard included the Drabant Guard (also known, in French, as the Garde du Corps), which was the King's small, personal infantry guard unit.[11] In Stockholm, the Life Guard consisted of a reduced staff unit, the Drabant Guard, and four companies of foot. In Riga, the regiment consisted of a staff unit, nine companies of foot, and one of dragoons. King Charles soon reduced the four companies in Stockholm to three, two of which he sent to the war in Bremen.[12]

In 1655, King Charles converted the Drabant Guard into a mounted Garde du Corps of company strength. To this was added a Life Company of Horse, which he enlisted in Germany. King Charles intended the two companies of horse to accompany him in the field as a personal bodyguard. Although he gave separate orders to the Life Guard of Horse, he regarded these two companies as part of the same Life Guard as the foot regiments, and from November 1657 at the latest, they were subordinated the colonel of the Life Guard. Moreover, King Charles also ordered the expansion of the Life Guard of Foot into 16 companies, four in Stockholm (formed of existing personnel reinforced with other men enlisted from the provincial regiments) and 12 in Germany (based on new men enlisted there). The enlistment effort did not fully succeed, but ultimately a Life Guard of Horse and Foot came into being, even though the two branches operated separately.[13]

---

[10] Lars Tersmeden, 'Carl X Gustafs armé: En konturteckning mot bakgrund av kriget mot Polen', Arne Stade (ed.), *Carl X Gustafs armé* (Stockholm: Militärhögskolan, *Carl X Gustaf-studier* 8, 1979), pp.9–48, on p.12. See also Lars Tersmeden, 'Carl X Gustafs armé 1654–1657', Arne Stade (ed.), *Carl X Gustafs armé* (Stockholm: Militärhögskolan, *Carl X Gustaf-studier* 8, 1979), pp.163–276, which is the most comprehensive survey of the Swedish army during the Deluge.

[11] The Drabant Guard had originated in the first half of the sixteenth century when King Gustavus I formed such a unit in imitation of many German princes. In Germany, such a unit was known as a Trabant Guard and the name seems to have derived from the fifteenth century. Curt Jany, *Urkundliche Beiträge und Forschungenzur Geschichte des Preussischen Heeres*, vol. 1 (Berlin: Grosser Generalstab, Kriegsgeschichtliche Abteilung II / Ernst Siegfried Mittler und Sohn, 1901), p.22.

[12] G. Bertil C:son Barkman, Sven Lundkvist, and Lars Tersmeden, *Kungl. Svea livgardes historia* 3:2: *1632 (1611)–1660* (Stockholm: Stiftelsen för Svea livgardes historia, 1966), pp.202–6.

When the Swedish invasion of the Commonwealth got underway in the summer of 1655, the strength of the army had increased through additional enlistment (and far more so than the six or seven enlisted regiments we have seen that the Lord High Justiciar Per Brahe had suggested half a year earlier). In fact, by then no less than some 15 enlisted regiments of horse and seven of foot had been added to the inventory, and yet more enlisted regiments were being raised.[14] However, most newly enlisted units never reached establishment strength, due to shortages in personnel available for enlistment. Moreover, soon attrition took its toll. As a result, throughout the war depleted units were regularly recombined into larger ones.

New units were raised at home, too. In 1656, the so-called Mountain County Regiment (*Bergsregementet*) was re-established (following an order issued in July 1655), raised in the mining districts of central Sweden.[15] In 1658, six new regiments were raised in the provinces then ceded by Denmark and Norway: Scania (cavalry), Bohuslän (dragoons), Halland (foot), Blekinge (foot), and Trondheim County (two regiments of foot). Except for the two Trondheim regiments, these soon, in one form or another, became part of and henceforth were retained in the inventory of Swedish national regiments.[16]

Regiments, Squadrons, and Battalions

The regiment was the primary administrative formation, but it was also used as a field unit.[17] During a campaign, the regiments were arrayed into temporary higher formations (right wing, centre, left wing) as needed. As before, each cavalry regiment was expected to have an establishment strength of 1,000 horses, divided into eight companies each of 125 horses. The cavalry, unlike the infantry, counted its strength in horses, not men. Two cavalry companies constituted a cavalry squadron, from which follows that a squadron had a nominal strength of 250 horses. The squadron was the main tactical unit in the cavalry and dragoons. Likewise, each infantry regiment was expected to consist of 1,200 men, divided into eight infantry companies each of 150 men. Four infantry companies constituted a battalion, from which follows that a battalion had a nominal strength of 600 men. The battalion was the main tactical unit in the infantry. In the Swedish army, the battalion was for historical reasons sometimes referred to as a brigade.

---

[13] *Ibid.*, p.214.

[14] Tersmeden, 'Carl X Gustafs armé: En konturteckning', p.12. For further details, see Lars Tersmeden, 'Värvningskampanjen 1655', Arne Stade (ed.),*Carl X Gustafs armé* (Stockholm: Militärhögskolan, *Carl X Gustaf-studier* 8, 1979), pp.117–62.

[15] Tersmeden, 'Carl X Gustafs armé: En konturteckning', p.12; Tersmeden, 'Carl X Gustafs armé 1654–1657', p.180.

[16] Jan Wimmer, 'Polens krig med Sverige 1655–1660: Operativ översikt', Arne Stade and Jan Wimmer (eds), *Polens krig med Sverige 1655–1660: Krigshistoriska studier* (Stockholm: Kungl. Militärhögskolan, *Carl X Gustaf-studier* 5, 1973), pp.325–417, on p.331.

[17] Both cavalry and infantry regiments had dedicated staff units. For a summary of the positions therein, see Tersmeden, 'Carl X Gustafs armé: En konturteckning', p.13. However, there were individual variations.

On campaign, a regiment's strength soon dwindled due to attrition. When reinforcements or new recruits were unavailable, which was routine during the Commonwealth campaign, actual strength would fall to a fraction of the establishment strength. Swedish units in the Commonwealth were notoriously understrength.

The Cavalry Company

A cavalry company would have around 14 officers and under-officers, many of whom had more than one horse. Muster rolls show that cavalry companies seldom followed the establishment organisation strictly. Each officer brought three or four horses, and commonly one or more servants to take care of them. Corporals and the *furier* had two horses each, one of which was attended by a servant. Common cavalrymen had only one horse each (Table 2). This was the same organisation which had been used since 1618, and it would remain essentially the same throughout the Carolean era and well into the eighteenth century.[18]

The cavalry was raised as companies but fought in squadrons. In battle, the men formed up in three ranks.

As always, the establishment strength was seldom representative of reality. As during the Thirty Years' War, a company might be slightly overstrength at the outset of a campaign.[19] Then, with mounting losses, it would gradually fall below establishment strength.

The Infantry Company

An infantry company consisted of six corporalships, each of 24 men. Two corporalships consisted of pikemen, while the remaining four were made up of musketeers. Manuals to the Swedish model of warfare focused on the corporalship as the lowest unit, with two corporalships constituting what might be called a platoon and three platoons per company. The two corporalships of pikemen generally deployed in the centre of the formation, flanked on each side by two corporalships of musketeers. The proportion of pike was accordingly one-third of the foot. Each corporalship consisted of four files, each of six men. In battle, the men accordingly formed up in six ranks.[20]

The company thus consisted of a total of 144 men plus 12 officers and under-officers, for a grand total of 156 men (Table 3). Additional officers and under-officers constituted the regimental staff (Table 4).[21] The number of officers was the same used since 1621, and it would remain essentially the same throughout the Carolean era and well into the eighteenth century. In battle, the infantry fought in battalions, each preferably consisting of four companies. Members of the regimental staff would command or fight with their designated companies. As in the past, battalions formed up with pikemen in the centre, flanked by musketeers. In the field, the establishment strength was seldom achieved. Depleted companies, sometimes from several regiments, would be combined into weak battalions as needed and as conditions allowed.

---

[18] There were individual variations, but for some additional details, see Tersmeden, 'Carl X Gustafs armé: En konturteckning', p.15.

[19] John Rumenius, *Wästgöta Ryttare i 30: åriga kriget: 1000 frivilliga bönder drar ut i kriget 1630* (Stockholm: Nyblom, 1987), pp.41–7, 49–55, 65–73, 75–81, 83–9, 91–7, 99–105. Rumenius reprints the muster rolls for the Västgöta Cavalry Regiment.

[20] Lorentz von Troupitzen, *Kriegs Kunst: Nach Königlicher Schwedischer Maniereine Compagny zurichten, in Regiment, Zug- vnd Schlacht-Ordnung zubringen, zum Ernst anzuführen, zugebrauchen, vnd in esse würcklich, zu unterhalten* (Frankfurt-am-Main: Matthaeus Merian, 1633), pp.10–25 with plates; Wendelin Schildknecht, *Harmonia in fortalitiis construendis, defendendis & oppugnandis*, vol. 3 (Stettin: Johann Valentin Rheten, 1652), pp.160–63.

[21] There were individual variations, but for some additional details, see Tersmeden, 'Carl X Gustafs armé: En konturteckning', p.15.

In each company, one musketeer corporalship was put under the command of the *furier* (a rank at the time anglicised as 'furryer' or 'furryor' and translated into English as 'under-quartermaster').[22] This was a sergeant with added duties originally involving the provision of supplies, lodgings, and similar tasks – in short those that required some degree of independent command. This corporalship was designated as the 'forlorn troop' (seventeenth-century German: *verlorne Trop*).[23] In seventeenth-century German military terminology, 'forlorn' signified a unit that was 'detached' from the main formation. The term by then did not necessarily signify any particularly perilous duties. This corporalship was simply detached as needed.[24] In Swedish, the corresponding term was *(ut) kommenderad* ('detached').

In the first official Swedish history of the Thirty Years' War, written in German and proofread by Lord High Chancellor Axel Oxenstierna and Queen Christina before being sent to the printer, Bogislaff Philip von Chemnitz described the Swedish tactical doctrine. He also indicated what he considered most important in the infantry's organisation:

> The infantry deployed in their regiments and companies. The companies deployed in their established corporalships and files (*rotts*), each with its carefully selected senior and junior file leader (*rottmeister*), so that every common soldier, even without any order from an officer, already knew in which position he would stand and fight.[25]

In other words, the emphasis was on the corporalship and file leaders, and on the fact that each soldier had been trained in what he was expected to do in battle. The Swedish army relied on training and the existence of a sufficient number of under-officers who were able to act on their own initiative in the situation for which they had been trained. Training and personal initiative won the battle, not a complex organisational structure.

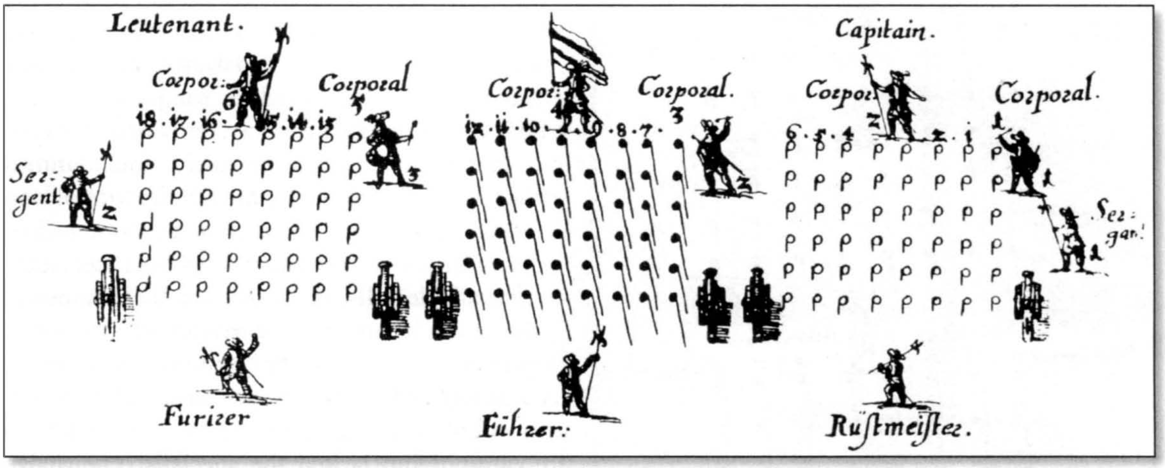
---

[22] Anon., *The Swedish Discipline, Religious, Civile, and Military* (London: Nathaniel Butter and Nicholas Bourne, 1632), vol. 3, pp.76, 77, 79, 82.

[23] Troupitzen, *Kriegs Kunst*, p.54.

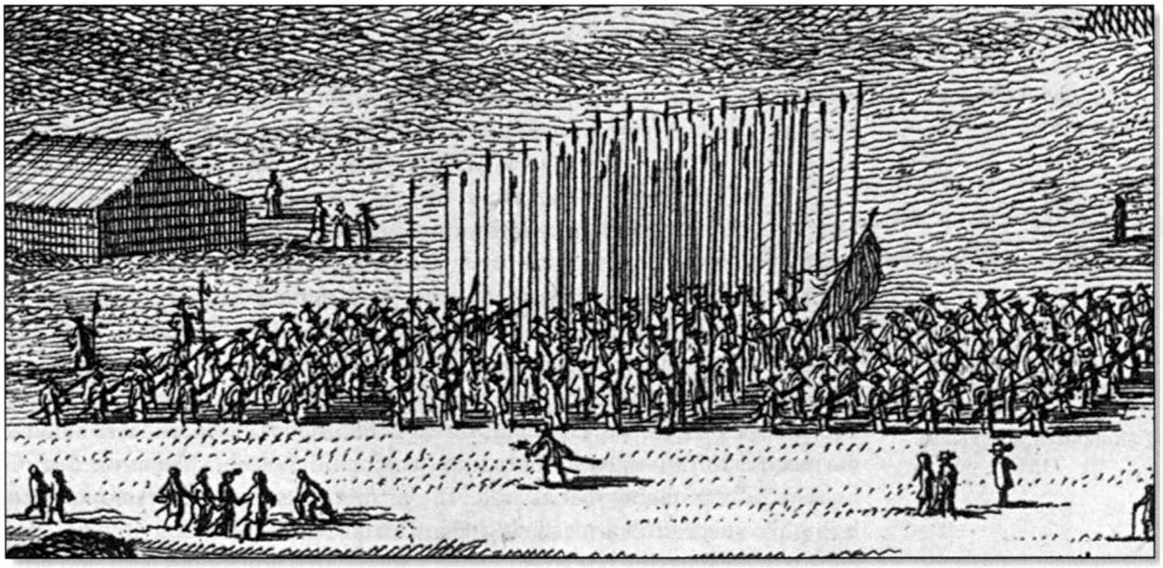
[24] Gustaf Petri, *Kungl. Första livgrenadjärregementets historia*, vol. 2: *Östgöta regemente till fot 1619–1679* (Stockholm: P.A. Norstedt & Söner, 1928),p.12.

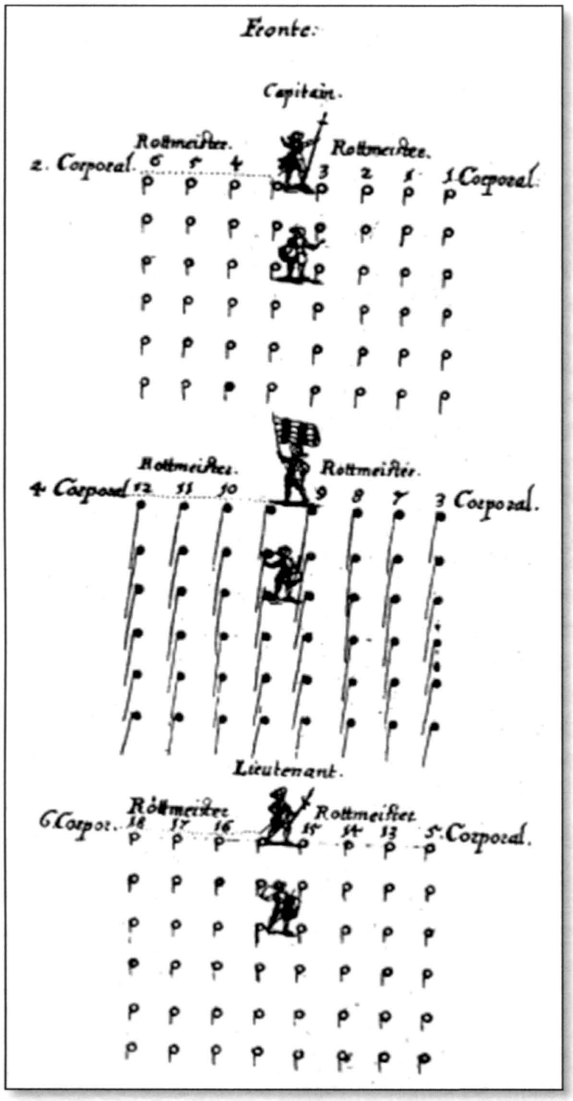
[25] Bogislaff Philip von Chemnitz, *Königlichen Schwedischen in Teutschland geführten Kriegs*, vol. 1 (Stettin: Georg Rethe, 1648), p.475.


Leutenant.
Capitain.
Corpor:
Corporal
Corpor:
Corporal.
Corpor:
Corporal.
Ser: gent.
Ser: gan:
Furirer
Führer:
Rüſtmeiſter.

Above: Swedish infantry company deployed in line, as described and illustrated by Lorentz von Troupitzen. (Troupitzen, *Kriegs Kunst*, 1633)

Below: Swedish infantry company deployed in column outside Gothenburg, *Suecia antiqua et hodierna*, 1709. The organisation remains identical to the one described by Troupitzen. (Johan van den Aveelen, based on a late seventeenth-century sketch by Erik Dahlbergh)





Swedish infantry company deployed in column, again described and illustrated by Lorentz von Troupitzen. (Troupitzen, *Kriegs Kunst*, 1633)

The Artillery

The artillery included both field artillery and garrison artillery, distributed throughout the entire Swedish realm from Sweden and Finland in the north to Bremen-Verden and the other German possessions in the south. Most artillerymen were enlisted within the Swedish kingdom, so the artillery arm in many ways remained national in composition. Both Swedish and Finnish artillerymen were moved to Stockholm for training. In war, infantrymen were temporarily detached to assist them as needed.[26] This was necessary, since available roll calls show that the number of artillerymen in any given garrison was too small to man all cannons. The professional artillerymen accordingly led crews of detached infantrymen, who would have received some training in how to fire cannons but lacked the specialist knowledge that the artillerymen had acquired.

In 1655 the entire artillery was reorganised into a new peacetime organisation of 918 men: the Artillery Regiment, which in turn was organised into companies (a staff unit and eight companies in Sweden, one company in Finland and Kexholm County, one in Livonia, one in Pomerania, and one in Bremen-Verden).[27] This was a return to an idea attempted earlier in the century for the infantry but not yet the artillery: the establishment of permanent territorial regiments which in times of war would produce field regiments.[28] In May the same year, the Artillery Regiment produced a wartime organisation: a field artillery regiment with a staff unit and four companies for King Charles's army and a field artillery regiment of three companies for the Livonian army. However, for the same reason that the earlier peacetime territorial regiment organisation for the infantry was abandoned, it soon became obvious that the Artillery Regiment organisation, too, did not live up to expectations. In 1658, the artillery arm resumed its former organisation, with field artillery companies established as needed.[29]

This was probably just as well. The artillery system had developed into a highly successful arm during the Thirty Years' War, and it remained essentially unchanged.[30] The system established by Lennart Torstensson remained in use, with calibres identified as 24-pounders, 12-pounders, 6-pounders, and 3-pounders. A regular cannon was known as a *kartov* (from German *Kartaune*; ultimately from Italian *quartana bombarda*), while a long-barrelled cannon was referred to as *slanga* (from German *Schlange*). A regular 48-pounder cannon was known as a *helkartov* ('full kartov'; German: *Ganzkartaune*), while a 24-pounder was a *halvkartov* ('half kartov'; German: *Halbkartaune*), and a 12-pounder was called a *kvartskartov* ('quarter kartov'; German: *Viertelkartaune*). In the same manner, a long-barrelled 24-pounder was called a *helslanga* (German: *Ganzschlange*), a long-barrelled 12-pounder was a *halvslanga* (German: *Halbschlange*), and a long-barrelled 6-pounder was called a *kvartsslanga* (German: *Viertelschlange*). Mortars existed in calibres ranging from 8-pounders to 300-pounders for siege use.[31] The regimental artillery was based on the long-barrelled 3-pounder (2.5 to 2.9 m long; the length increased lethality at longer distances). Torstensson had compensated the greater weight of the new type of regimental artillery with the introduction of more horses to provide mobility. The artillery system within the field armies also included many 12-pounders, even though they almost always were fewer in numbers than the regimental 3-pounders.[32]

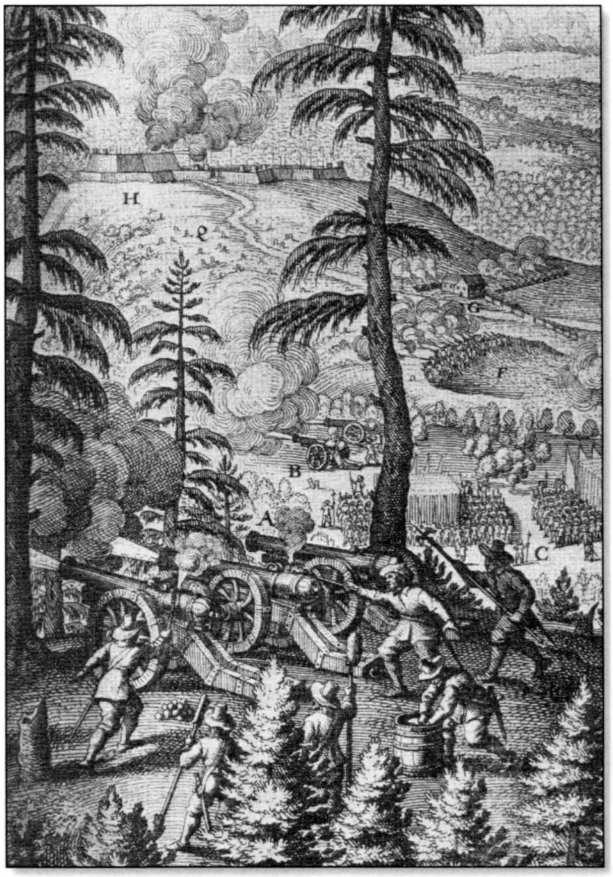
---

[26] Jonas Hedberg (ed.), *Kungl. Artilleriet: Yngre vasatiden* (Stockholm: Militärhistoriska Förlaget, 1985), p.25; Jonas Hedberg, *Kungl. Artilleriet: Carl X Gustafs tid* (Stockholm: Militärhistoriska Förlaget, 1982, 1995), p.15.

[27] Hedberg, *Kungl. Artilleriet: Carl X Gustafs tid*, pp.12–13, 34–5, 281.

[28] Fredholm von Essen, *Lion from the North*, vol.1, p.124.

[29] Hedberg, *Kungl. Artilleriet: Carl X Gustafs tid*, p.16.



Swedish artillery at Wasserburg-am-Inn, Bavaria, 15 June 1648. (*Theatrum Europaeum*)

The artillery was ultimately under the control of the national chief of artillery (Swedish: *rikstygmästare*), who always held high military rank, second only to that of field marshal. In battle, the national chief of artillery, if present, customarily commanded the centre, which usually consisted of artillery and infantry.

Even more so than the other arms, the artillery depended on the existence of an efficient ordnance industry. This industry was significantly reformed in 1653, when the factories were subordinated the national chief of artillery. The ordnance industry by then included more than 16 cannon foundries, 20 workshops for casting shot, four gunpowder factories, a sulphur factory, a saltpetre factory, and a dozen other manufacturing establishments. Sweden mined its own copper and iron ore. Total production covered the military needs and also sufficed to sustain major exports of guns, iron cannon, and shot.[33]

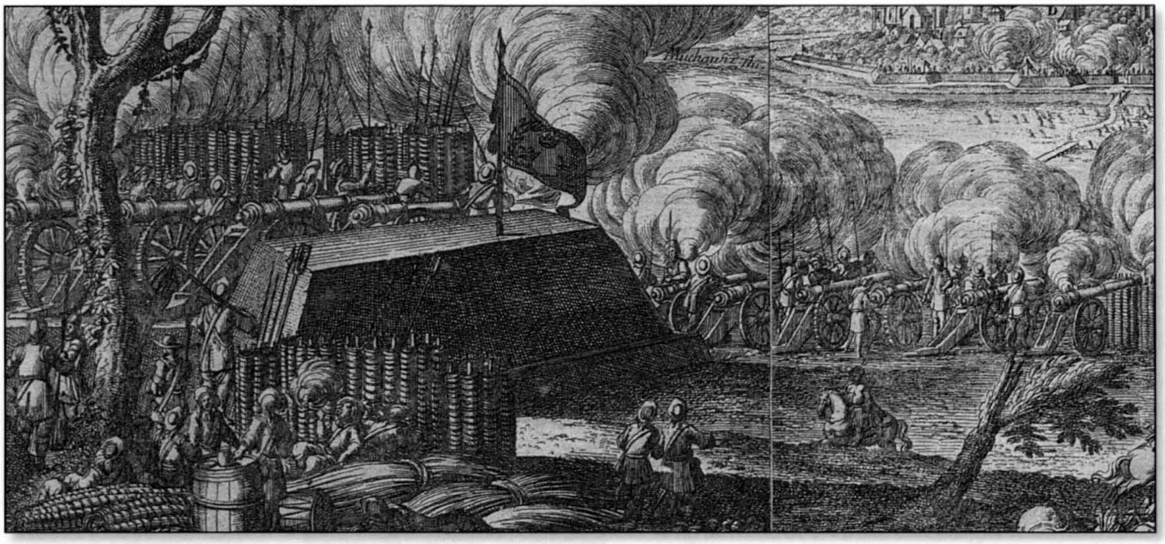
---

[30] Fredholm von Essen, *Lion from the North*, vol. 2, pp.172–3, 184.

[31] Hedberg, *Kungl. Artilleriet: Carl X Gustafs tid*, p.21.

[32] Hedberg, *Kungl. Artilleriet: Yngre vasatiden*, p.70.

[33] Hedberg, *Kungl. Artilleriet: Carl X Gustafs tid*, pp.26–32, 281.



Swedish artillery at the siege of Brest, 1657. (Erik Dahlbergh)

The Swedish artillery had a tradition, since 'time immemorial', that it was entitled to the church bells in every town that it captured. This was, no doubt, necessary when Sweden lacked the resources to cast cannons and accordingly needed to acquire replacement materials wherever possible. In the Commonwealth, unsurprisingly, the taking of church bells as plunder was not well received. Moreover, church bells were valuable, and on at least one occasion (in Marienburg, Prussia) King Charles overruled the artillery and had some of the captured bells sent to embellish churches in Stockholm. This eventually resulted in a formal protest from the head of artillery, but only years after the death of King Charles and the end of the conflict.[34]

The Navy, incidentally, still did not control its own artillery, which organisationally lay under the national chief of artillery. In 1650, the Navy's artillery for the first time received its own chief of artillery (Swedish: *artilleritygmästare*). However, he remained subordinated to the national chief of artillery. The Navy received both cannons and many artillerymen from the Artillery Regiment.[35]

The Fortification Corps

A modern army invariably needed technical specialists including quartermasters, mapmakers, intelligence officers, engineers, and sappers. The Swedish army instituted its technical specialists in the Fortification Corps (Swedish: *Fortifikationen*), under the formal command of the Quartermaster-General. Until 1645 this officer, with the rank of colonel, remained formally subordinated the national chief of artillery. However, in the period up to 1653, the Fortification Corps gradually became fully independent under a new Quartermaster-General, Johan Andersson Lenaeus (*c.* 1610–1674; soon ennobled as Wärnschöld).[36] The duties of the Quartermaster-General were extensive and included the provisioning of armies in the field, the construction and maintenance of fortifications, military intelligence, and mapmaking. In the field, these tasks were the responsibility of local quartermasters.

---

[34] *Ibid.*, p.77.

[35] *Ibid.*, p.15.

The quartermaster also controlled a field army's engineers and sappers. When the army was on the march, and there was reason to expect local peasants to have built timber obstacles or abatis, that is, barricades of felled trees (a traditional feature of northern warfare), then the quartermaster would ensure that men armed with suitable tools to clear the obstacles marched in the vanguard. For instance, when a Swedish army during the late Thirty Years' War marched into the Danish province of Scania in 1644, the quartermaster assigned the initial marching order as follows: 50 horse, followed by 100 detached musketeers and four regimental cannons, which in turn was followed by 500 pioneers equipped with the appropriate tools.[37]

Engineers and sappers were often tasked to bridge rivers. Moreover, the army brought ready-made field bridges which could be used to cross small rivers. River-crossing gear including field bridges were so frequently employed during the wars in the Commonwealth that King Charles saw nothing unusual in simply requesting a few field bridges to be sent post haste from the nearest supply depot. Such requests were particularly common when he co-operated with less technically skilled armies such as the Transylvanians who regularly needed engineering support.[38]

In addition, engineers and sappers played a vital role in the fortification of camps. Around the camp, they customarily built a dense system of outlying redoubts and artillery batteries. Field fortifications were constructed from earth, rock, and wood from the surrounding area and to some extent depended on what was locally available. Wicker baskets filled with earth and stones were used as gabions when the soil cover was insufficient for trenches and ramparts. The Swedish army was known for its fortification skills, and many of its standard practices were later adopted by the French fortification expert Sébastien Le Prestre de Vauban (1633–1707), to whose name they were linked for future generations. The Swedish engineers adapted their fortifications to the landscape. This is obvious from contemporary prints but has also been confirmed by archaeological excavations. Yet, good as the static defences were, they did not constitute the entire set of defences. The Swedish army relied on its engineers, but standard procedure was to complement the static defences with dynamic ones in the form of regular cavalry patrols.[39]

---

[36] Ludvig W:son Munthe, *Kongl. Fortifikationens historia*, vol. 2: *Fortifikationsstaten under Örnehufwudh och Wärnschiöldh, 1641–1674* (Stockholm: Norstedt & söner, 1906), pp.124–5; Hedberg, *Kungl. Artilleriet: Yngre vasatiden*, p.145.

[37] Munthe, *Kongl. Fortifikationens historia*, vol. 2, p.49; which copies the complete order of march in a document dated 11 February 1644 (O.S.).

[38] Hedberg, *Kungl. Artilleriet: Carl X Gustafs tid*, p.119.

[39] Václav Matoušek, et al.,*Třebel 1647: A Battlefield of the Thirty Years' War from the Perspective of History, Archeology, Art-history, Geoinformatics, and Ethnology* (Prague: Krigl, 2017), pp.95–6, 154, 156–7, 159–62.

Levies

In times of war, neither conscription nor enlistment provided sufficient manpower. If so, the Crown could still levy troops among the peasants. This was done through a quota that the peasants had to fill. Levied troops would not be trained, and they would have to pay for their own weapons and supplies. On the other hand, they were only required to serve at home. Levied troops were usually used to man defensive bastions along the external borders, in effect operating as a border guard. The levied peasants would serve for a time, and then be replaced by other levies from the same area. The Crown directed that former soldiers should be selected as leaders of the levies.

In times of need, the Crown also had the right to raise a general levy. A general levy consisted of all men able to bear arms and usually was called out to defend an external border. The levied troops would have to arm and supply themselves. Their use was accordingly restricted, for practical reasons, to certain geographical areas and short durations of time. Levies could also be called out in the form of burgher militias, which would have to take some responsibility for defending their towns when under siege.

During the wars of the Deluge, Sweden primarily operated units of levies along the border with Norway, in Finland, and eastern Livonia. However, it soon became clear that many peasants in the eastern border regions could not be trusted. Because of religious issues, the Orthodox generally favoured the Muscovites, while in southern Livonia many still harboured sympathies for the Commonwealth. Nonetheless, levies remained part of the Swedish war effort everywhere on the eastern border. In Ingria and Kexholm County, they often volunteered for duty and participated in raids into Muscovite territory.

Training and Responsibilities

During the Thirty Years' War, King Gustavus Adolphus had not only introduced new forms of organisation and tactics, he had also been adamant that all men had to train in their use.[40] As part of the 1634 constitutional reform, the Crown issued regulations on how the troops of the provincial regiments should be trained in times of peace. Most of the weapons and equipment of the regiments should be stored in central depots in the Crown's fortresses. When an entire regiment was gathered, for a muster or other reason, weapons should be issued and exercises in field formations should be held. Furthermore, weapons for one corporalship per company should be retained and stored in a suitably located church. The soldiers should be exercised every Sunday, in conjunction with church services.[41] These occasions should not be interpreted as military field manoeuvres with combined units under realistic conditions, in the sense that developed later in the century.[42] At most, one regiment at a time exercised in formation. The emphasis seems to have been on maintaining and moving in formation, as well as weapons handling.

---

[40] Fredholm von Essen, *Lion from the North*, vol. 1, p.211.

[41] Petri, *Kungl. Första livgrenadjärregementets historia*, vol. 2, pp.214–15. In 1650 or 1652, the Department of War (*Krigscollegium*) suggested doubling this amount, that is, to maintain muskets and pikes for a total of four corporalships instead of one. However, this increase was never implemented, and King Charles soon after his coronation in 1654 had to issue an order to do so. *Ibid.*, 298.

[42] Fredholm von Essen, *Charles XI's War*, pp.21–2.

When the army mobilised in 1655, King Charles ordered each provincial regiment to retain a staff unit under the regimental colonel in Sweden, together with 20 men from each company, to make sure that the training of new conscripts continued while the main force served abroad.[43]

Written military manuals existed for training purposes. When Gustavus Adolphus introduced new forms of organisation and tactics, the emphasis at first lay on introducing the new forms in the national army, that is, the army raised in the Swedish and Finnish heartlands. However, the King wanted the new methods to be employed in the enlisted units as well.[44] This is obvious from the German- and English-language military manuals which eventually were published on how to organise an army in the Swedish manner. The publications included both organisational and tactical details for operations according to the Swedish manner and blank contracts with the organisational requirements for those foreign colonels who wished to enlist a unit for the Swedish army.[45] After the Thirty Years' War, the practice of publishing such manuals continued.[46] However, no military manual from this time is known to have been printed in the Swedish language. Probably none was published. The national units were trained at home, and it is likely that officers relied on handwritten training notes for this purpose. Because of their nature as mere training aids, none have survived into the present from the time of the Thirty Years' War or the reign of King Charles (yet, such notes are known to have existed, and a very limited number from the early eighteenth century or later can be found in Scandinavian archives).

The most prominent military manuals to the Swedish art of war at the time of King Charles were two German-language publications: Lorentz von Troupitzen's *Kriegs Kunst* of 1633 and Wendelin Schildknecht's *Harmonia in fortalitiis construendis, defendendis & oppugnandis* of 1652. Since German was one of Sweden's official languages, we can assume that many officers read them. For this reason, the German-language manuals were probably also used to train the national units. It is, for instance, known that Troupitzen's *Kriegs Kunst* was used for Swedish army training as late as in the 1670s.[47]

These two manuals also seem to have influenced the first known printed Swedish-language military manual: *Een Militarisch Exercitiæ Book eller Regementz Spegel*, published in Stockholm in 1669. Written by Julius Richard de La Chapelle (1625–1672), it was the first known Swedish-language manual of the Swedish art of war of the seventeenth century. La Chapelle's book is believed to have greatly influenced Swedish military practices in the Great Northern War of 1700–1721. A second such manual, although published in German, appeared in 1674. This was Major Jacob Ogilvy's *Kurtze Verfassung der Exercitien auff der Pique und Musquete*. Both La Chapelle and Ogilvy were infantry officers and both focused on infantry organisation and tactics.

---

[43] See, for example, Lars-Olof Larsson, *På marsch mot evigheten: Svensk stormaktstid i släkten Stålhammars spegel* (Stockholm: Prisma, 2007), p.59.

[44] G.B. C:son Barkman, *Gustaf II Adolfs regements organisation vid det inhemska infanteriet: En studie över organisationens till komst och huvuddragen av dess utveckling mot bakgrunden av kontinental organisation* (Stockholm: Meddelanden från Generalstabens krigshistoriska avdelning, 1931), p.88.

[45] Robert Monro, 'The Manner to Exercise a Body of Musketiers', Robert Monro, *Monro, His Expedition with the Worthy Scots Regiment (Called Mac-Keyes Regiment)*, vol. 2 (London: William Jones, 1637), pp.187–92; *Swedish Discipline*, vol. 2, pp.39–73; *Swedish Discipline*, vol. 3, pp.75–90; Troupitzen, *Kriegs Kunst*.

[46] Schildknecht, *Harmonia*, vol. 3, pp.160–63.

[47] Petri, *Kungl. Första livgrenadjärregementets historia*, vol. 2, p.106.

Of these two military writers, La Chapelle is the most interesting. He was the son of Adam Richard de La Chapelle (d. 1636), a French dragoon officer who had gone into Swedish service in 1611 and fought in Muscovy, Livonia, and Prussia until he in 1629 had to retire because of crippling wounds. La Chapelle senior was a brave but rowdy character who distinguished himself in war but in peace allowed his equally rowdy soldiers and tenants to brawl in the streets of Stockholm where they also established several brothels.[48] Young Julius was born during the campaign in Livonia, and he grew up a Swedish citizen during the Thirty Years' War. At age 15 he enlisted in the army as a common soldier. However, La Chapelle junior rose in the ranks and eventually became an officer. During the wars in the Commonwealth and Denmark under King Charles, he rose from lieutenant to major in the Uppland Regiment. Like his father, La Chapelle junior was a brave soldier who did not take easily to times of peace. During the festivities held in 1660 in conjunction with the funeral of King Charles, he was on guard duty in Stockholm. However, La Chapelle and some of his men then had a drunken quarrel with a group of equally rowdy journeymen from the Guild of Tailors which resulted in the death of several tailors. Sentenced to capital punishment, La Chapelle for a while had to flee the country, until an agreement with the family members of those killed and the Guild of Tailors enabled a pardon. La Chapelle returned to duty and was eventually promoted to lieutenant colonel. However, he was constantly short of money and it is believed that he wrote the military manual as a means to gain some extra cash.

In comparison, Jacob Ogilvy (1632–1681) was an upright fellow. Probably born in Scotland, he in 1654 left service in the French army to join the Swedish one under King Charles in the Commonwealth. He rose from the rank of ensign in the Kalmar Regiment in 1656 to that of lieutenant in the Kronoberg Regiment in 1658, in which he was promoted to captain in 1660. Ogilvy eventually reached the rank of lieutenant colonel in the Kalmar Regiment in 1677. By then, he had already published his manual.[49]

The procedures described in two manuals can be assumed to be based on those in common use during King Charles's wars. They conform to what is known about Swedish procedures in the Thirty Years' War from 1632 onwards. However, there is no way to know whether changes were introduced after the

---

[48] With himself being known in Swedish, by a probably untranslatable pun, under the nickname 'Laskepelle' ('Squeezy Pete'), La Chapelle senior's unruly soldiers were naturally popularised as *laskepellar* ('the Squeezy Pete boys').

[49] On La Chapelle, Ogilvy, and their manuals, see Lars Tersmeden, 'Med pik och musköt: Två exercisböcker från Carl X Gustafs tid', *Aktuellt och historiskt: Meddelande från Militärhistoriska avdelning vid Kungl. Militärhögskolan* (1969), pp.5–32.

Deluge but before the publication date of the manuals. What the manuals do give us, however, is a description of how Swedish officers who had fought in the Deluge understood their duties, as well as those of their subordinates. In this, La Chapelle's manual is of particular interest, since he provides his personal take on duties and responsibilities. Moreover, we find sufficient parallels between La Chapelle's manual and those of his predecessors to conclude that the Thirty Years' War practices remained firmly established among Swedish officers. The parallels and similarities are too many to list here, but a few samples taken from the duties of the different ranks of officers show the continuity of such practices.

For instance, La Chapelle argued that the company captain should be an experienced man who constantly exercised his unit. The captain should be 'like a father to his men', taking care of their welfare and training. He should not be too severe but his voice should be listened to with 'attention and fear', when so was needed. Troupitzen, writing in 1633, would have agreed, since he concluded that the captain should be 'loved and feared' by his men, and that the men's pay must be paid out correctly and as often as feasible.[50]

The lieutenant, La Chapelle noted, should be like a housekeeper for the unit and have the necessary knowledge to command the entire company when the captain was unavailable. However, La Chapelle did not copy Troupitzen's advice that the lieutenant should be 'more feared than the captain', since he was the one responsible for punishments within the company.[51] Even so, it is clear from La Chapelle's description that it still was the lieutenant's duty to administer punishments. Schildknecht, writing in 1652, also emphasised this part of the lieutenant's duties.[52]

As for the ensign, La Chapelle agreed with Troupitzen and Schildknecht that in addition to carrying the company colours in battle (but not on the march; this was the task of the company standard-bearer), his duties included serving as an advocate of soldiers to be punished for misdemeanours. The ensign was expected to ask for mercy on their behalf, so that the captain could pardon the culprits without undermining his authority. The ensign was expected to be well liked by the soldiers for other reasons as well, including as a means to prevent mutinies.[53] In addition to these duties, La Chapelle argued, the ensign was responsible for maintaining a list of those men who were ill, wounded, or exhausted, and arrange for carts, medical care, and supplies when needed, so that no man was 'left behind or neglected'. In the words of Schildknecht, the ensign 'must be the friend of all soldiers'.[54] In short, the ensign represented the interests of the common soldiers, in the same way that the lieutenant represented discipline and order.

The same applied to the company standard-bearer (German: *Führer*; Swedish: *förare*). La Chapelle agreed with Troupitzen and Schildknecht that the standard-bearer was responsible for the ill and wounded. He would see

---

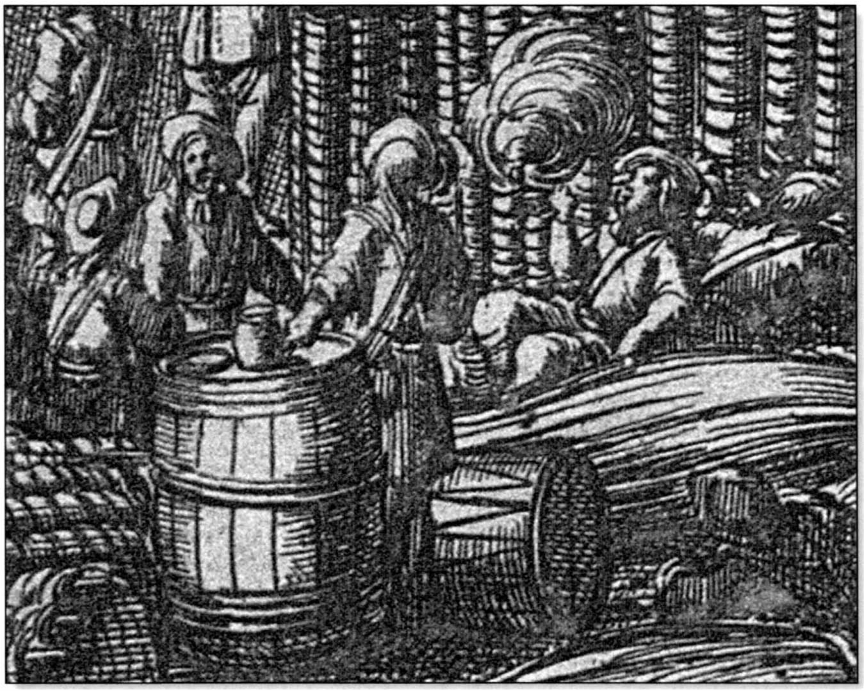
[50] Troupitzen, *Kriegs Kunst*, p.5.

[51] *Ibid.*, p.5.

[52] Schildknecht, *Harmonia* vol. 3, p.162.

[53] Troupitzen, *Kriegs Kunst*, p.6.

[54] Schildknecht, *Harmonia*, vol. 3, p.162.


Swedish soldiers have a rest and a smoke during the siege of Brest, 1657. The use of tobacco for smoking became popular in the Swedish army during the Thirty Years' War. (Erik Dahlbergh)

to that they received medical attention, if such was available, and sufficient supplies.[55]

These brief samples show that La Chapelle followed earlier practices when he listed the duties of officers and men.[56] Yet, it is obvious that the disorderly La Chapelle, despite his repeated violations of public morals, regarded the welfare of the men under his command as of higher priority than had his predecessor Troupitzen, who at least in his manual seems to have looked upon soldiers as expendable commodities. There may have been practical reasons for La Chapelle's insistence on the men's welfare, since soldiers who died of disease or wounds or deserted no longer were available to fill up the ranks. On the other hand, his concerns may also have derived from the bond that often emerged between officers and men in an infantry company. For good or ill, they served together and had to trust one another, especially when alone in a foreign and hostile country.

Raising Troops

By tradition and because of a lack of sufficient alternative sources of national income, the officers of the national army were provided, as part of their salary, with tax exempted Crown land to farm (farmsteads subsequently known as 'military homesteads', *militiehemman*), of a size appropriate to the rank held. Alternatively, the officer received the appropriate rent corresponding to the tax owed, while the farmstead remained in private hands. The system meant to provide for soldiers through the permanent allotment (*indelning*) of sources of revenue – land – for their needs.

---

[55] Troupitzen, *Kriegs Kunst*, p.8; Schildknecht, *Harmonia*, vol. 3, p.162.

[56] Julius Richard de La Chapelle, *Een Militarisch Exercitiæ Book eller Regementz Spegel* (Stockholm: I. Meurer, 1669).

Outside the allotment system, the nobility was still obliged to provide some armed and equipped cavalrymen who fought in the Retinue of Nobles. A noble did not have to serve in person, since he could hire a cavalryman to attend in his stead. However, all officers in these units tended to be men from the nobility. This traditional military duty was known by an old name that can be translated as military service but originally signified service on horseback (Swedish: *rosstjänst, russtjänst, rusttjänst*). This duty was generally understood to have begun around the age of 17.[57] The Retinue of Nobles was held to be the senior cavalry regiment in the army but usually only served at home, in defence of the country.

Instead, most cavalry was raised by the establishment of what was referred to as a cavalryman's holding (*rusthåll*), which consisted of one or more farms which individually or collectively volunteered to support a cavalryman. The peasant or peasants would enter into a contract with the Crown, and then hire a cavalryman whom they provided with a house and pay. In return, the provider received a substantial tax reduction. The system was an extension of the permanent allotment (*indelning*) of sources of revenue – land – for the raising and maintenance of soldiers. For this reason, any priest, burgher, and professional, too, who owned a farmstead, was permitted to establish a cavalryman's holding just like a peasant.[58] The cavalrymen were formed into provincial cavalry regiments. Since each provincial regiment was based on men from one particular province, the system eventually tended to result in a certain esprit de corps, with troops that due to family and community links performed well together. Moreover, it became normal for a regiment to have some of its companies at home, and some overseas. For a well-to-do peasant, the contract to raise and support a cavalryman was a long-term investment and accordingly a calculated financial risk. If the cavalryman survived and remained in service, it was advantageous from a fiscal point of view to fund the cavalryman instead of paying regular taxes. On the other hand, if the cavalryman and his horse were lost in the war, the peasant would have to produce a replacement soldier and horse. If this happened within a year or two, the peasant made a loss.

It was always more difficult to raise infantry on a voluntary basis. For this reason, the Crown had to engage in conscription (Swedish: *utskrivning*). During the Thirty Years' War, attempts had been made to abandon the system of general conscription in favour of a new system of conscription based on military districts and administrative provincial regiments which raised field regiments for campaigns. This ultimately resulted in a process in which the individual province contracted to raise and maintain a regiment of a set size in both peace and war. Small farmsteads were allotted to provide revenues to common soldiers. Such a farmstead became known as a 'perpetual soldier's holding' (***ständigt knektehåll***), since the understanding was that it continuously would generate, and provide for, one soldier. This practice was first established in the province of Dalecarlia (the Dalecarlia Regiment).[59] Over time, the system of contracting perpetual soldier's holdings spread to other provinces. The new Ångermanland Regiment, raised in the provinces of Ångermanland, Medelpad, and Jämtland in 1646, adopted the system from the outset. The province of Västerbotten (the Västerbotten Regiment) adopted the system in 1649.[60] However, the general adoption of the new system followed only after King Charles's wars and the process took time to be fully established. For instance, the province of Hälsingland (the Hälsinge Regiment) applied to contract in 1650, but then the Crown rejected the application. A new application followed in 1664, but this application was only accepted in 1675.[61] The new system of perpetual soldier's holdings only became commonplace during the reign of King Charles's son, Charles XI (r. 1660–1697).[62]

---

[57] Henning Hamilton, *Afhandling om krigsmaktens och krigskonstens tillstånd i Sverige, under Konung Gustaf II Adolfs regering* (Stockholm: Kongl. Vitterhets Historie och Antiquitets Academiens handlingar 17, 1846), p.175.

[58] *Ibid.*, p.190.

For this reason, conscription still had to be resorted to. Conscription was the arbitrary raising of men from a population.[63] Although resented, the concept still had a certain legitimacy, since conscription from 1544 onwards had to be granted by parliament, in which the peasants were represented. The conscripted soldiers had to be armed, trained, and supplied by the Crown. On the other hand, they could be used anywhere, overseas or at home, as well as indefinitely. Many peasants regarded conscription as a death sentence, which ultimately it often was, and numerous conscripts attempted to desert, especially before they were shipped overseas.

The conscription quotas usually favoured the peasants on noble lands, since the nobility did not wish to lose too many workmen.[64] Since 1636, the conscription rate was 1 in 10 for peasants on Crown lands and 1 in 20 for peasants on noble lands. Since the quotas favoured peasants who worked for nobles, an increasing number of rural men soon turned to the nobility for employment, thus reducing their risk of conscription. Over time, the Crown accordingly did not receive as many conscripts as in the past.[65] In 1642 the system for raising conscripts was amended in a manner which found greater popular acceptance. Henceforth, groups of farms were responsible for supporting a soldier who served for life. Where formerly the quota had been calculated by head (*bondetal*), henceforth it was calculated by farmstead (*gårdatal*). Although the number of troops to be conscripted was unchanged, the new system allowed more flexibility. Besides, the farmstead organisation, unlike the previous organisation into groups of 10 men, was permanent. The system thus became more stable.[66] For Crown peasants, the farmstead organisation consisted of 10 farms, while for peasants on noble lands, it comprised 20 farms. Better-off peasants could hire a substitute in advance.

---

[59] Fredholm von Essen, *Lion from the North*, vol.1, p.114.

[60] Lars Tersmeden, "Manskapsersättningsproblematiken' vid det inhemska infanteriet under Carl X Gustafs krig', Arne Stade (ed.),*Carl X Gustafs armé* (Stockholm: Militärhögskolan, *Carl X Gustaf-studier* 8, 1979), pp.77–115, on p.79.

[61] Hamilton, *Afhandling*, pp.110–11.

[62] Fredholm von Essen, *Charles XI's War*, p.219.

[63] Swedish peasants were divided into three categories: tax peasants, who owned their lands as freeholds and paid tax to the Crown; peasants on Crown lands, who leased Crown lands but generally were entitled to have the lease transferred to their sons; and peasants on noble lands, who under similar conditions leased lands owned by the nobility. Tax and Crown peasants elected representatives to parliament, while peasants on noble lands had to be represented by the Estate of Nobles.

[64] While a noble could sanction troublemakers among his peasants by selecting them to conscription (a method of maintaining order recognised by contemporaries), Crown officials had a similar right to conscript obstinate and wilful tax and Crown peasants. As a collective, Swedish peasants had more rights and freedoms, and a higher degree of parliamentary representation, than those in any other seventeenth-century European state, but the system still depended on a certain level of social control.

[65] Petri, *Kungl. Första livgrenadjärregementets historia*, vol. 2, pp.245–6.

In 1653–1654, the quotas were increased to 1 in 8 and 1 in 16 respectively, as a means to rebuild the military after the demobilisation that had come with the Peace of Westphalia. In 1655, they were reduced to the previous figures. However, in 1656 the need for additional men saw the quota for peasants on noble lands raised to 1 in 10. In 1657, the assessment reverted to the unpopular calculation by head (*bondetal*). In 1658–1659, after the victory over Denmark, the 1655 quotas were reintroduced as was the calculation by farmstead (*gårdatal*).[67]

When funding was available, the Crown found it far more convenient to raise professional enlisted troops (German: *geworbne*; Swedish: *värvade*) on the Continent than to increase conscription rates at home, train the new recruits, and ship them overseas. Whole units were raised. Enlisted soldiers received monthly pay. Their officers, in addition to pay, also received military homesteads (*militiehemman*) like other officers. Farmstead revenues were allotted to enlisted common soldiers, too, in a similar manner to the one which provided revenues for Swedish conscripts.[68] The enlistment of foreign troops was handled by individuals, usually noblemen, who had received a patent or contract to raise a regiment. An enlisted regiment might consist of infantry or cavalry. It was expected to conform to the standard Swedish organisational forms and to be trained in the Swedish tactical doctrine.

Manpower and Mobilisation

Sweden's population during the reign of King Charles has been estimated at between 925,000 and 970,000 in Sweden and some 450,000 in Finland. To this should be added the populations of Sweden's other possessions, in particularly those in Germany and Livonia, which were substantial. However, it was only in Sweden and Finland that soldiers and sailors were raised by other means than voluntary enlistment. The number of soldiers raised in Sweden and Finland as seen as a share of the population has been estimated as approximately six percent in Sweden and 6.75 percent in Finland (where military service often was seen as a better option than subsistence farming).[69] To raise this share of the population was not a major burden. Besides, many soldiers survived the war and eventually returned home. It is likely that the

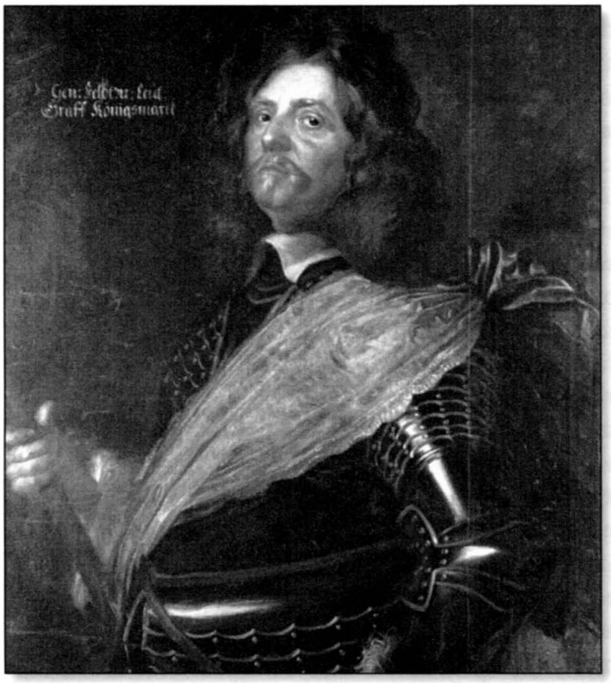
---

[66] Tom Gullberg and Mikko Huhtamies, *På vakt i öster*, vol. 3 (np: Schildts, 2004), p.199.

[67] Berndt Fredriksson, *Försvarets finansiering: Svensk krigsekonomi under skånska kriget 1675–79* (Uppsala University, dissertation, Studia Historica Upsaliensia 81, 1976), p.27.

[68] Hamilton, *Afhandling*, pp.154–6.

[69] Tersmeden, 'Manskapsersättningsproblematiken', p.101.



Hans Christoph von Königsmarck, 1651. (Matthäus Merian the Younger, Skokloster Castle)

plague which struck during the wars decreased the population more than the mobilisation for military duty. Even so, it will be shown that the estimated share of the population raised for military purposes in Sweden was far higher than what was achieved in the other states engaged in the wars of the Deluge, with the single exception of the Crimean Khanate, which employed different procedures for mobilisation.

When Charles in June 1654 was crowned King of Sweden, the Swedish military establishment consisted of some 52,000 men (Table 5). This was an impressive military force for a small country, but it was less than half the number which Sweden had controlled by the end of the Thirty Years' War, when Sweden had some 110,000 men under arms.[70]

The strongest garrisons were deployed in Livonia. More than half of the infantry from Finland, which by tradition provided garrisons for the eastern border, was deployed there, with the capital Riga as the major garrison town. Livonian defences focused on the potential direction of attack from the south-east along the River Düna (Russian: Dvina; modern-day Daugava). In comparison, the garrisons in the direction of Pskov to the east were weak and their tasks were limited. Further to the north, there was a reasonably strong garrison in Narva, which was a centre of commerce for the trade with Muscovy. The Swedish defensive deployment shows that the Commonwealth was regarded as the major threat on the eastern border. This was unsurprising, since only the truce prevented hostilities between Sweden and the Commonwealth. Meanwhile, the border with Muscovy was quiet and had been so since 1617. There were no hostilities, nor any signs of imminent war. Hence, there were hardly any dedicated garrison units in Finland. The soldiers of the field units there were deemed sufficient to ward off any threat from Muscovy.

When the Council of the Realm in late 1654 voted for mobilisation, Sweden began to raise more men. The 1655 parliament granted conscription for the coming three years. In addition, enlistment of foreign units took place abroad, in Germany under Hans Christoph von Königsmarck (1605–1663) in Bremen and Arvid Wittenberg von Debern (1606–1657) in Pomerania. In Livonia, enlistment took place under the experienced but now aged Grand Marshal of the Realm, Gustav Horn af Björneborg (1592–1657). All three were well-known commanders from the Thirty Years' War.

Königsmarck was a Brandenburger who had served in the Imperial army when King Gustavus Adolphus landed in Germany, after which he went into Swedish service as a captain of a company of dragoons. In 1648 he led the raid which captured Prague Castle. Königsmarck was appointed Field Marshal in spring 1655.[71]

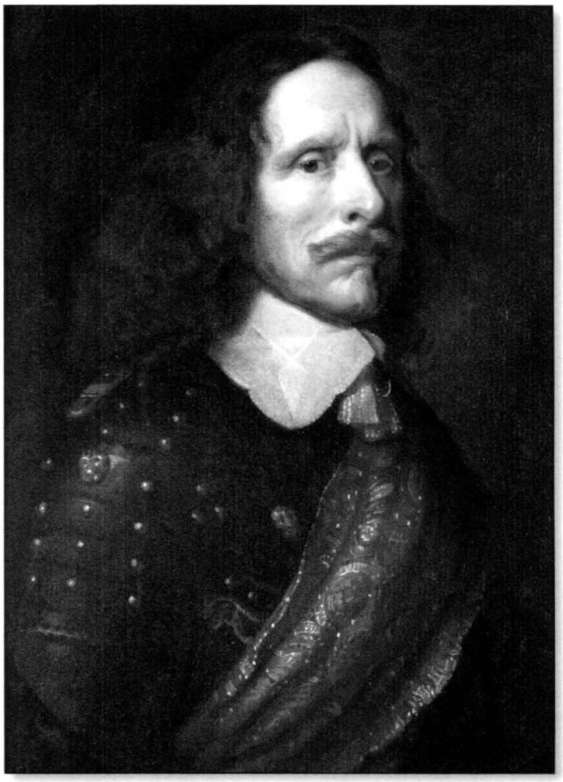
---

[70] Fredholm von Essen, *Lion from the North*, vol. 2, p.160.

Wittenberg von Debern, or only Wittenberg as he was commonly called, was born in Sweden. He had begun his military career in 1622 and had fought in most important campaigns and battles of the Thirty Years' War, including in Prussia under King Gustavus Adolphus. Like Königsmarck, he was appointed Field Marshal in spring 1655.

Gustav Horn, the renowned but aged veteran and field marshal of the Thirty Years' War, had served since 1612, first during the war in Muscovy, then in Dutch service, and finally in the Thirty Years' War when he had played a crucial role as sometime overall commander of the Swedish military forces in Germany.

While the three men managed to raise many new units, the ambitious enlistment plans could not be fulfilled. There was a general ban on enlistment in the Empire. In addition, funding was insufficient and there were shortages in supplies. The enlisted units from Germany assembled in Pomerania, from which two invasion armies in the summer of 1655 set out towards the Commonwealth. Meanwhile, a third army assembled in Livonia. We will see that the Swedish campaign began with these three field armies. Their total strength was some 34,150 men (Wittenberg's army of 14,350 and King Charles's army of 12,600, with a total of 26,450 men, which advanced into Poland; and the Livonian army of 7,200, which eventually moved into Lithuania).


Gustav Horn, 1651.
(Attributed to David Beck; Gripsholm Castle)

Following the departure overseas of most field units, the remaining military force in the Swedish heartlands outside Germany was quite limited (Table 6). Almost the entire contingent of field units in Finland had deployed to forward bases in Livonia. Those field units which remained in Sweden were mostly deployed in preparation for a possible Dutch or Danish attack on south-western Sweden. There were no indications that Muscovy would attack Finland. Moreover, Muscovy clearly devoted its resources to the campaign in the Commonwealth.

When the field armies had set out, another 17,375 men remained in reserve or in garrisons. Adding some 1,000 artillerymen and 6,000 sailors, the total Swedish military establishment in the summer of 1655 consisted of some 58,525 men. The raising of almost 60,000 men was no small matter, but it was much less than during the Thirty Years' War and, in addition, less than 60 percent of the total were intended for offensive purposes.[72] Both during the

---

[71] One of his sons, Otto Wilhelm von Königsmarck (1639–1688), became a distinguished Swedish field marshal during the Scanian War.

[72] The calculation is based on the data presented in Tersmeden, 'Carl X Gustafs armé 1654–1657'. Tersmeden summarises the data on p.192. This results in a similar total, except that he omits the

Thirty Years' War and when King Charles set out for the Deluge, many of his men were enlisted abroad. This suggests that the conscription effort asked of, and granted by, parliament was not that great a burden for the population. In comparison, when Sweden in 1644 engaged in ongoing operations in both Germany and Denmark and had mobilised for war on both fronts, the Crown still expected to raise the total number of *national* troops to some 54,000 soldiers and 6,000 sailors.[73] Since the 1655 mobilisation to a large extent depended on enlisted *foreign* troops, the conscription burden in Sweden and Finland remained significantly lower than in the previous decade.

Moreover, yet more enlisted units were added to the field army as the campaign proceeded. By mid 1656, the total number of soldiers deployed to field armies in the Commonwealth is estimated to have exceeded 38,500 men (15,750 cavalry, 2,075 dragoons, and 20,800 infantry), despite combat losses and attrition.[74] The reinforcements consisted of approximately 28 cavalry regiments, six dragoon regiments, and seven infantry regiments. However, compared to the national regiments, these enlisted regiments were understrength already from the outset. On average, the enlisted cavalry units only reached about 75 percent of the planned strength. This was hardly a great result, but in comparison to the enlisted dragoon units (which on average reached around 23 percent of the planned strength according to the available evidence) and infantry units (some 35 percent of the planned strength), the results were quite adequate.[75]

Meanwhile the field army units and garrisons in Livonia, Estonia and Ingria remained much the same as in the previous year (or higher, because of reinforcements from Finland).[76] Assuming that the other categories (artillerymen and sailors) remained roughly the same as previously, this produces a total of almost 63,000 men under arms. At the beginning of 1656, the Polish and Lithuanian units can be added as well. This adds another 9,000 men to the total, which produces a grand total of almost 72,000 men under arms. And more soldiers were on their way: an estimated 8,500 cavalry and 3,500 infantry enlisted in Germany, Prussia, the Netherlands, and Silesia. In early 1656 these units successively arrived to reinforce the field armies in the Commonwealth.[77] Although the figures quoted differ in quality and not all can be confirmed with equal certainty, they suggest that in spring 1656, King Charles had mobilised some 84,000 men of all categories. This remained well below Swedish military manpower at the end of the Thirty Years' War (as noted, 110,000 men). However, it was nonetheless a very significant

---

sailors from the calculation. Minimal forces were also maintained in Sweden's overseas colonies in North America and West Africa. Fredholm von Essen, *Lion from the North*, vol. 2, pp.218–24.

[73] Fredholm von Essen, *Lion from the North*, vol. 2, p.158.

[74] Tersmeden, 'Carl X Gustafs armé 1654–1657', p.197.

[75] *Ibid.*, 198.

[76] Rainer Fagerlund, 'Kriget i östersjöprovinserna 1655–1661: Operationer och krigsansträngningar på en bikrigsskådeplats under Carl X Gustafs krig', Arne Stade (ed.), *Kriget på östfronten* (Stockholm: Militärhögskolan, *Carl X Gustaf-studier* 7:1, 1979), pp.224–7.

[77] Wimmer, 'Polens krig med Sverige', pp.353–4.

force and the largest ever achieved under King Charles.[78] In the same way as during the Thirty Years' War, most of the fighting strength of the field armies consisted of men enlisted abroad, primarily in Germany but also in the Commonwealth.

However, normal attrition took its toll and in autumn 1656 the plague struck, reducing the numbers significantly.[79] As commonly happened under such circumstances, depleted enlisted regiments were dissolved and the survivors moved to reinforce other units. This means that it becomes more difficult to ascertain actual numbers. It has been estimated that in the summer of 1657, only somewhat more than 22,000 men were deployed in the field against the Commonwealth and Denmark (11,600 in the Commonwealth and 10,800 marching towards Denmark). In addition, the Swedish military included at least 16,000 men in German garrisons, over 18,000 in Sweden, over 5,000 in Finland, and some 6,000 in the Navy. In total, despite casualties and losses to the plague, by mid 1657 more than 67,000 men remained under arms, although some were too ill for active service.[80]

Uniforms

Swedish military dress in the mid to late 1650s had changed little from the styles common at the end of the Thirty Years' War.[81] Officers had generally adopted French fashion, a process which had begun already during the previous war. An officer sometimes turned up the brim of his hat on one side. The hair was worn longer than before, often down on the shoulders. Some officers had begun to adopt the allonge wig.

By the time of the Deluge it had long been customary to issue cloth, or in some cases ready-made clothes, to Swedish soldiers as part of their payment. For this reason, most guard units had already worn uniforms, or at least garments of uniform colour and cut, during the sixteenth century, while some field regiments had been so garbed during the Thirty Years' War. There had not yet been any attempt to provide a national uniform. To the contrary, the Crown preferred regiments with differently coloured uniforms since this facilitated command and control, by making it easier to distinguish units from one another on the field of battle.

---

[78] Many previous histories claim, based on the summaries provided by Johan Levin Carlbom (1854–1916) that by the end of 1655, following the successes in the Commonwealth and the enlistment of many new units in Germany, the Swedish military establishment consisted of a total of 93,000 men (not including those Commonwealth soldiers who had joined the Swedish cause). Of these, an alleged 68,000 were in the Commonwealth, 9,000 in the Navy, 7,200 in Sweden, some 6,000 to 7,000 in Finland, and 2,000 in the other territories. Carlbom, *Tre dagars slaget*, pp.22–23. However, a more detailed study reveals that Carlbom's figures cannot be substantiated.

[79] Tersmeden, 'Carl X Gustafs armé 1654–1657', p.212.

[80] *Ibid.*, 220. Note that Tersmeden's summary does not include units in Finland and the Navy, and that his figures for Germany are contradicted by his later data. *Ibid.*, pp.270–71. For Finland (5,145 men), see Jussi T. Lappalainen, 'Finland och Carl X Gustafs ryska krig: Försvaret av den östra rikshalvan 1656–1658', Arne Stade (ed.),*Kriget på östfronten* (Stockholm: Militärhögskolan, *Carl X Gustaf-studier* 7:2, 1979), pp.113–13. In 1656, the Navy included 5,021 sailors (Finn Askgaard, *Kampen om Östersjön på Carl X Gustafs tid: Ett bidrag till nordisk sjökrigshistoria* (Stockholm: Kungl. Militärhögskolan, *Carl X Gustaf-studier* 6, 1974), p.72), to which were added enlisted specialists. In Germany, we know of 9,550 men in Bremen-Verden in June 1657. (Tersmeden, 'Carl X Gustafs armé 1654–1657', pp.270–71) and, in King Charles's estimate, 6,800 men in Pomerania (*Ibid.*, pp.210–11).

[81] Fredholm von Essen, *Lion from the North*, vol. 2, pp.189–90.

At the coronation in June 1654, King Charles's Drabant Guard of 36 men were dressed in feathered hats, gold-trimmed buff coats with sleeves of pale blue velvet, and gloves. Over the buff coat each man wore a pale blue (*bleu mourant*) cloak. Breeches were pale blue too, while stockings were yellow with red trim.[82] This was a break with tradition; the colours of the previous Vasa dynasty had been yellow and black. The Carolean dynasty, of whom King Charles was the first king, instead used blue and yellow. In 1656, a casack was added to the uniform, like the breeches pale blue in colour, and the buff coats henceforth had sleeves of leather, not velvet. It is believed that the Life Guard of Horse was dressed in blue and yellow too, like the Drabant Guard. In 1656, each man of the Life Guard of Foot was supplied with blue cloth and materials for yellow linings, so it is likely that it, too, henceforth was dressed as the Drabant Guard.[83] Based on the materials issued, it seems that coats were blue with yellow lining while breeches were yellow.[84] Cloaks were grey from 1656.[85] In short, the Drabant Guard, and probably the Life Guard as a whole, wore the blue and yellow later associated with Carolean uniforms, including those of the Scanian War of 1675–1679 and the Great Northern War of 1700–1721. However, dress patterns remained the same as during the last years of the Thirty Years' War.

This does not mean that all men were uniformed as planned. The regular wear and tear while on campaign made it necessary to issue such garments as were available, regardless of colour. In 1658, it was noted that many men of the Life Guard of Foot lacked garments.[86] Blue and yellow may at this time have been primarily used for peacetime ceremonial duties. Moreover, to celebrate the surrender of the Polish Crown's army and most provinces after the conquest of Cracow in 1655, at least some of the Life Guard units received new garments made of black cloth.[87] As late as in spring 1657 the Swedish quartermaster Erik Dahlbergh noted that the Life Guard of Horse was known under the name 'blackcoats'.[88] This would indicate that black uniforms or at least black coats remained in use also in the field. We do not know how many of the Life Guard units received black. The issue of such garments was probably unique to that time and place, and those who happened to be on site.

For non-guard units, the first known uniform colours under King Charles derive from his wedding in late 1654, when several companies from a number of regiments paraded in his honour. For this occasion they received

---

[82] Barkman, Lundkvist, and Tersmeden, *Kungl. Svea livgardes historia* 3:2, p.524.

[83] Erik Bellander, *Dräkt och uniform: Den svenska droppens beklädnad från 1500-talets början fram till våra dagar* (Stockholm: P.A. Norstedt & Söner, 1973), p.124.

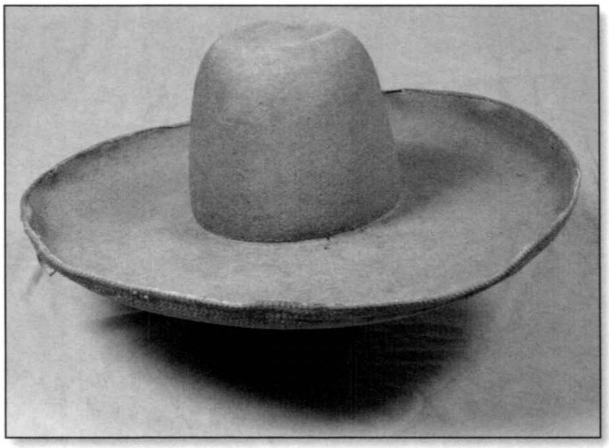
[84] Barkman, Lundkvist, and Tersmeden, *Kungl. Svea livgardes historia* 3:2, p.527.

[85] *Ibid.*, p.525.

[86] Bellander, *Dräkt och uniform*, p.124.

[87] Barkman, Lund kvist, and Tersmeden, *Kungl. Svea livgardes historia* 3:2, p.250.

[88] Erik Dahlbergh, *Erik Dahlberghs dagbok (1625–1699)* (Uppsala: Almqvist & Wiksell, 1912), p.95.



Beige-grey felt hat, mid seventeenth century. Marked as 'pattern for Queen Christina's infantry' and clearly intended for general issue. Brim: diameter 53.0 cm, circumference 163.0 cm, and width 18.0–18.5 cm. Crown: height 16.7 cm and diameter 25.0 cm. The outer edge of the brim is protected by a sewn band of wool and linen. One of very few surviving infantry hats of the period. (Army Museum, Stockholm; AM 11857)

new regimental uniforms. Some units received green, others blue or grey garments, with lining in unknown but different colours.

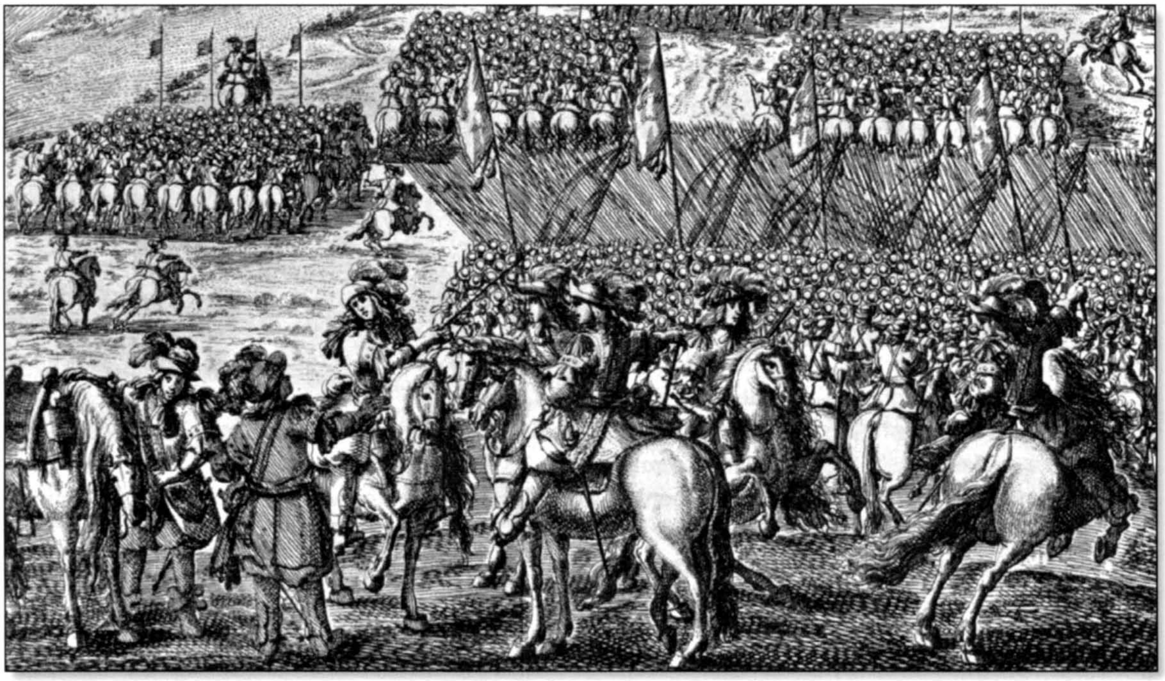
In March 1655 regimental uniforms were issued for each infantry unit. A surviving inventory dated this year is the first document which lists the Swedish uniforms in detail for almost all national dragoon and infantry regiments. As far as can be ascertained, the uniforms were intended for all combat personnel in the unit up to and including the rank of captain. If so, this was unusual for the time. The only regiments missing in the inventory are five from Finland. We do not know if this omission derived from clerical error or if those regiments were not part of the general issue of uniforms in this year. One reason for this uncertainty is that the main objective of the inventory seems not to have been the regulation of uniforms, but to give instructions for conscription. The uniform details, although presently the most interesting part of the inventory, were clearly deemed surplus to the conscription instruction. Nonetheless, the inventory claims to derive from the personal specification and directive of King Charles, so we can assume that the uniform details, in one form or another, passed through his hands before the inventory was drawn up.[89]

For this reason, the common interpretation of the inventory is that it mirrors King Charles's desires for his army and accordingly lists most uniforms. The uniform colours are reprinted in Table 7. In this table we have attempted to reconstruct the uniforms of the missing Finnish regiments by assuming that the western regiments received red while the eastern regiments received blue. Strictly speaking, there is no real evidence for this. On the other hand, those Finnish uniforms which are listed in the inventory conform to this pattern. Since cloth was bought in bulk, a distribution along such lines may have been intended, since it would have greatly assisted logistics. Similarities of this kind are also obvious among other units in the inventory, for instance the reddish-brown cloth which was shared by the geographically close Skaraborg and Elfsborg Regiments and the red cloth shared by the geographically close Jönköping and Kronoberg Regiments. It is also likely that some of these regiments were already uniformed in their respective colours. For instance, it seems likely that the Västmanland Regiment had already received green garments for the 1654 parade.

In 1656, the cloth issued to the regiments already changed for some of them. Skaraborg Regiment now received blue breeches. Elfsborg Regiment would

---

[89] Björn Asker, 'Svenska uniformsförteckningar 1655–1683', *Meddelande XXXVII Armémuseum 1976–77* (Stockholm: Armémuseum, 1978), pp.77–100, on pp.78–83. The original document is reprinted in Bellander, *Dräkt och uniform*, pp.128–9.



Swedish cavalry officers at Sandomierz, 3 April 1656, as depicted by Erik Dahlbergh who knew how Swedish officers dressed in the field. (Detail from Erik Dahlbergh)

use red, not reddish-brown coats. Jönköping Regiment would receive yellow breeches.[90] In all cases, the instructions concerned the distribution of cloth. There is no information on whether the instructions could be followed by units in the field. We have seen that even the guard units frequently lacked uniform garments, so it can be assumed that the situation was worse in the other regiments.

There is no similar evidence regarding cavalry uniforms. A possible explanation is that since the cavalry was expected to wear breastplate and backplates or buff coats, uniform colours were less important.

There is also little information on artillery uniforms. Contemporary depictions show grey coats as predominant (and this colour would remain the most striking characteristic of Swedish artillery uniforms), even though some men in 1656 and 1658 apparently used red or blue coats instead. In November 1658, blue cloth for coats and yellow cloth for breeches were distributed to artillerymen deployed to the war in Denmark. In winter, they used sheepskin furs and, as headgear, the fur-lined *karpus*, a round woollen cap with flaps that could be turned down to protect the eyes, ears, and neck.[91]

For obvious reasons, the Crown had to take into account the climate conditions in Scandinavia. When needed and available, the field army received overcoats. Furs were distributed to soldiers in the Arctic, which included the northern parts of Sweden and Finland.[92]

Because of the lack of national uniforms, soldiers still used field signs to distinguish friend from foe. From the late 1630s onwards, Swedish soldiers customarily wrapped a wreath of straw around their left arm or put a whisk of straw in the band around their hat as field signs. This custom persisted, and Swedish soldiers used bands of straw at the battle of Warsaw in 1656 (20 years later, Swedish soldiers still employed straw field signs in the battle of Lund in Sweden).

---

[90] Bellander, *Dräkt och uniform*, p.130.

[91] Hedberg, *Kungl. Artilleriet: Carl X Gustafs tid*, pp.25–6.

[92] Lappalainen, 'Finland', p.118.

Weapons and Equipment

Officers and Under-Officers

As before, officers provided their own arms and armour, the latter typically a cuirass, consisting of a shot-proof breastplate and backplate, and perhaps a helmet. Many officers discarded armour altogether. In battle, each officer would be armed with two wheellock pistols and a rapier. Infantry officers usually added a partisan, or in case of officers of pike units, perhaps a half-pike 5 cubits (2.97 m) in length.[93]

By 1646, Swedish pistols generally had a total length of some 55 to 62 cm, with a standard calibre of 16.2 mm and a total weight of 1.275 kg.[94] There were still variations, however. Mid-seventeenth century wheellock pistols for cavalry use remained very long. It was not unusual for a pistol to reach a total length of 70 cm or more.[95]

By the time of the Deluge some officers had begun to use flintlock pistols instead of the still very common wheellock pistol. So for instance, a pair of flintlock pistols was made in Paris for Queen Christina in the 1640s. These were not only used for display; Christina was well trained and notably skilled in shooting, fencing, and horseback riding. By then, flintlock pistols were also used on campaign by Charles, before he succeeded Christina as King.[96] However, flintlocks did not become general military issue until after the Scanian War of 1675–1679.

Unlike officers, under-officers in the Swedish army received their arms from the Crown. An under-officer, too, was armed with a rapier and perhaps pistols. Those serving in the infantry would carry partisans, or perhaps a half-pike.

Cavalry

Each cavalryman was expected to wear a helmet and cuirass, consisting of a shot-proof breastplate and backplate. The required armour was not always available, but regulations still insisted on its use. It seems likely, based on contemporary illustrations, that cavalrymen continued to favour the cuirass but avoided the helmet. To some extent, the same conclusion can be drawn from the Stockholm armoury records. In 1656, the armoury distributed 15 cuirasses but only eight helmets (before the eight helmets were distributed, the armoury had a total of 45 in the inventory – still fewer than the number of cuirasses). In the same year, the armoury received 112 new cuirasses but apparently no new helmets.[97] Although data is limited, this suggests that existing helmets were issued, but apparently no longer ordered from the manufacturers. In the field, cavalrymen sometimes even discarded the backplate, only retaining the breastplate for protection. Many wore a buff coat instead of metal armour. Some wore no more than a coat. Judging from later paintings based on contemporary sketches by Dahlbergh, cavalrymen seldom wore uniform garments and armour. Armament would consist of a pair of wheellock pistols and a rapier.

---

[93] Josef Alm, *Blanka vapen och skyddsvapen från och med 1500-talet till våra dagar* (Stockholm: Rediviva, 1975), p.143.

[94] Theodor Jakobsson, *Lantmilitär beväpning och beklädnad under äldre Vasatiden och Gustav II Adolfs tid* (Stockholm: Generalstaben, 1938), p.116 n.3; Josef Alm, *Eldhandvapen 1: Från deras tidigaste förekomst till slaglåsets allmänna införande* (Stockholm: Rediviva, 1976), p.211; Josef Alm, *Arméns eldhandvapen förr och nu* (Stockholm: Kungl. Armémuseum, 1953), p.119.

[95] Alm, *Arméns eldhandvapen*, pp.120–21.

[96] Alm, *Eldhandvapen 1*, pp.209, 220.

In 1655, King Charles ordered 203 wheellock carbines from the Netherlands for his newly established Life Guard of Horse.[98] There are no indications that other cavalry units received carbines, the use of which was abolished in the Thirty Years' War. Swedish line cavalry units only resumed their use in the 1660s.

Dragoons

Dragoons were mounted musketeers who moved on horseback but fought on foot, armed with musket, which might be matchlock or snaphance, and rapier. There is no information in the arsenal archives that pistols ever were distributed to dragoons at this time. Swedish dragoons wore issued helmets but no breastplates. They wore shoes, not riding boots, and no spurs.[99] Having said this, over time dragoons increasingly began to dress and operate like cavalry.

Infantry

Most infantrymen were musketeers. The Swedish army retained the Dutch-style 10 bore matchlock musket (drilled for a ball weighing one tenth of a pound, corresponding to a nominal calibre of 19.7 mm), which had been introduced already by King Gustavus Adolphus. The 10 bore musket's large calibre gave it greater range and, more importantly, a somewhat increased penetrative power than other muskets.

Since 1646, each matchlock musket manufactured in Sweden was supposed to correspond to the officially issued pattern, which meant that they should have a total weight of 4.675 kg. A snaphance musket was to have a total weight of 5.1 kg. During the final years of the Thirty Years' War, there had been many complaints about the quality of newly manufactured muskets. The high demand had persuaded some manufacturers to cut corners to save time and money, and some soldiers had lost both hands and limbs in misfire accidents and from burst gun barrels. A major cause of accidents was probably the variable characteristics of gunpowder, the manufacture of which still left much to desire.[100] The safety problems were perhaps one reason why army-issue muskets still were commonly used with a fork rest. Another problem was the recoil, which was significant. The fork rest presumably helped by taking some of this force, which otherwise might physically harm the soldier, something which is attested to even in late seventeenth-century documents.[101] Yet, the fork rest was frequently discarded in the field. It was, for instance, not used during sieges.

---

[97] Alm, *Blanka vapen*, pp.263.

[98] Alm, *Arméns eldhandvapen*, pp.116, 124; Barkman, Lundkvist, and Tersmeden, *Kungl. Svea livgardes historia* 3:2, pp.475.

[99] Hamilton, *Afhandling*, p.209; Alm, *Arméns eldhandvapen*, pp.114–15; Jakobsson, *Lantmilitär beväpning och beklädnad*, p.121.

Fork rests remained in service in the Swedish army under King Charles (and would remain until after the Scanian War of 1675–1679). However, their number in the field army decreased rapidly. In 1655, the Stockholm armoury distributed a total of 9,863 muskets but not a single fork rest. In 1656, the same armoury distributed 6,954 muskets and 1,500 fork rests. All fork rests were then sent to Riga, not the field army in Poland.[102] In 1657, the new companies of the Östgöta Regiment received muskets only, without fork rests.[103] In 1657, the army in Riga did not receive any fork rests. However, it did receive 1,000 swinefeathers (elsewhere also known as Swedish feathers).[104] This was a short pike, with a total length of approximately 1.8–2 m including the 30 cm head. The swinefeather could be used as protection against cavalry but also came with an attachment for resting the musket barrel, like a fork rest. A unit of musketeers with swinefeathers firmly planted in the ground in front of them would give the appearance of a wall of spear points. Moreover, with the addition of logs to link them together, several swinefeathers could be arranged into a *cheval-de-frise*, an anti-cavalry obstacle that was positioned in front of the infantry line so as to provide protection against a cavalry charge. There is no information to suggest that swinefeathers were shipped to the army in Poland, and we do not know the extent to which they were used in Livonia. In 1656, another 600 swinefeathers were shipped to Viborg. Yet another 1,000 arrived in Finland in 1657. Stored in Viborg, they were never distributed to field units. Instead, the Swedish units in Kexholm County wanted caltrops, which were easier to carry and worked just as well on the few roads along which enemy cavalry might advance through the forest. In spring 1657, Stockholm sent 1,700 caltrops to Finland, in the same delivery as the swinefeathers.[105]

Preserved Swedish muskets from the mid seventeenth century, now in the Army Museum and Royal Armoury, Stockholm, have a total length of about 159 cm, a barrel length of 116.5 to 117.5 cm, and a total weight ranging from 4–5 kg.[106] In reality, the ambition to issue all soldiers with new muskets of the same pattern took time to carry out. Garrison soldiers in Sweden had to make do with existing stock. In the Dalecarlia Regiment, for instance, the

---

[100] Alm, *Eldhandvapen 1*, pp.171–2, 183–4; Alm, *Arméns eldhandvapen*, p.98.

[101] Jakobsson, *Lantmilitär beväpning och beklädnad*, p.98 n.1.

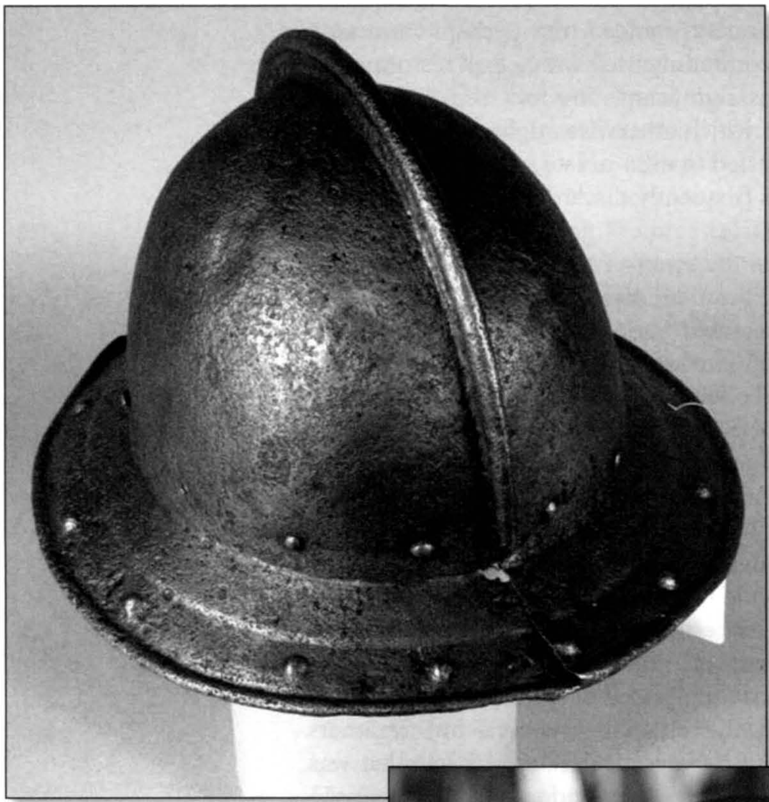
[102] Alm, *Eldhandvapen 1*, p.176. Fagerlund, 'Kriget i östersjöprovinserna', p.180, suggests 1,300 fork rests.

[103] Alm, *Eldhandvapen 1*, p.176.

[104] Fagerlund, 'Kriget i östersjöprovinserna', p.180.

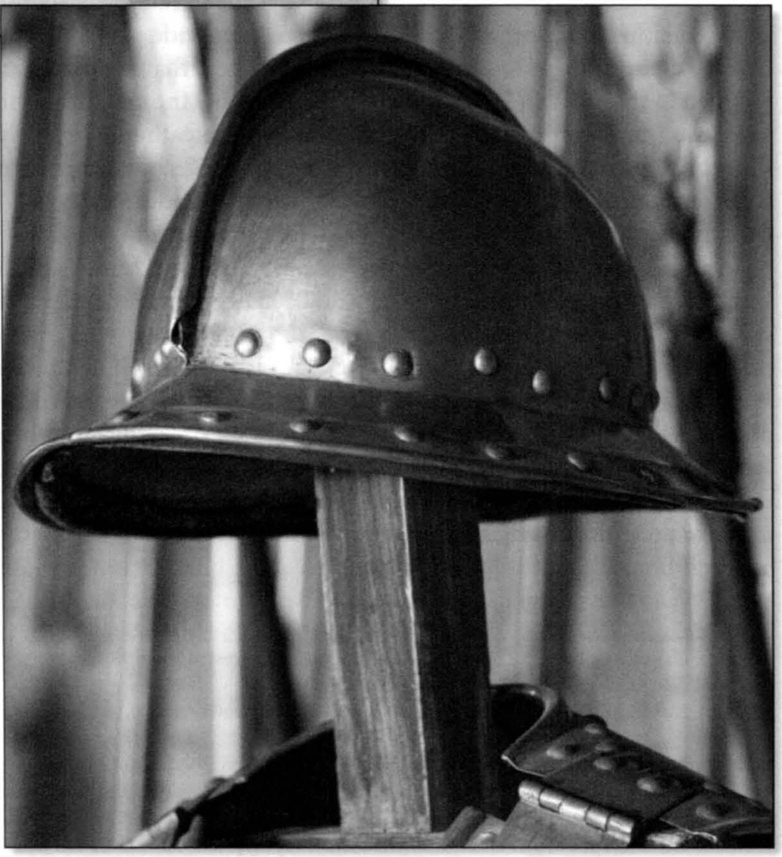
[105] Lappalainen, 'Finland', pp.118–19, 179–80.

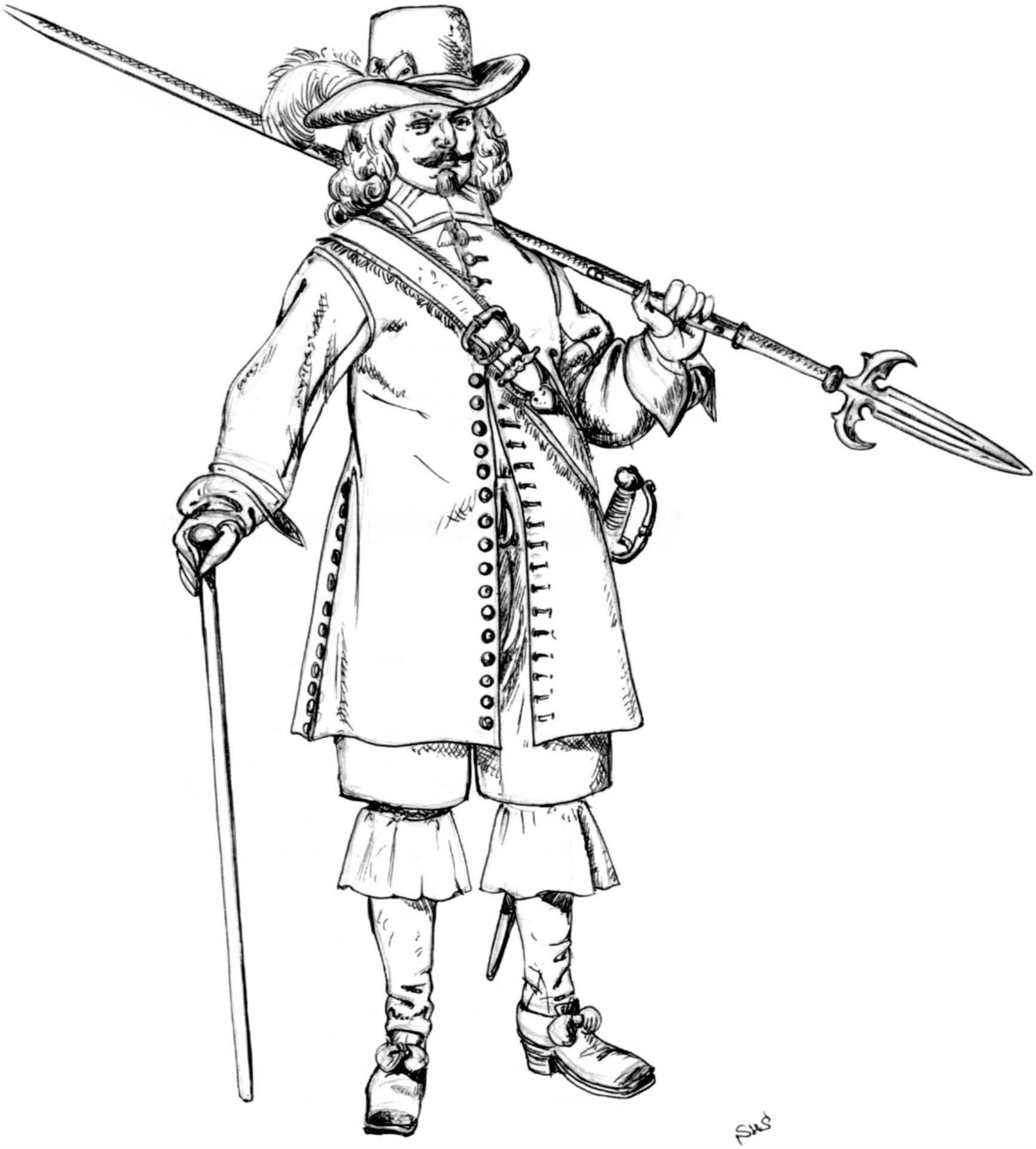
[106] Alm, *Eldhandvapen 1*, p.174; Alm, *Arméns eldhandvapen*, p.328.



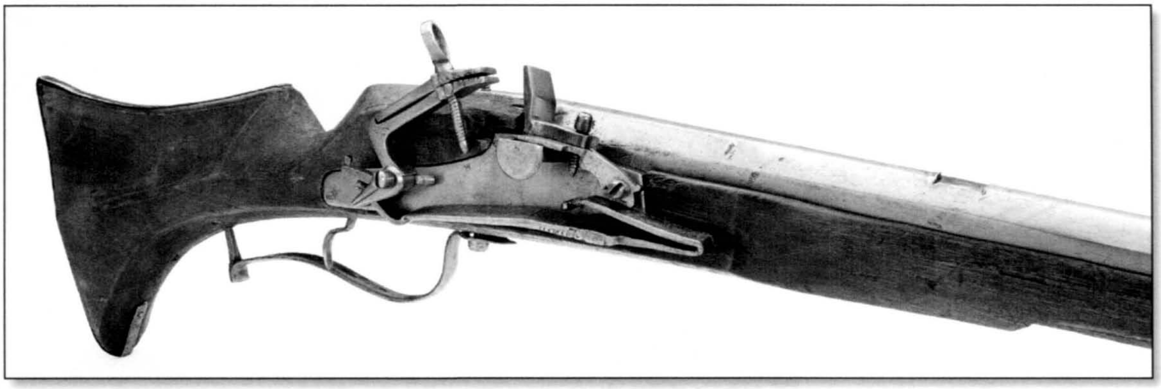
Left: Infantry helmet of the mass-produced Dutch type, 1620–1660. From Vadstena Castle. (Army Museum, Stockholm)

Below: Pikeman's helmet, seventeenth century. (Skokloster Castle)



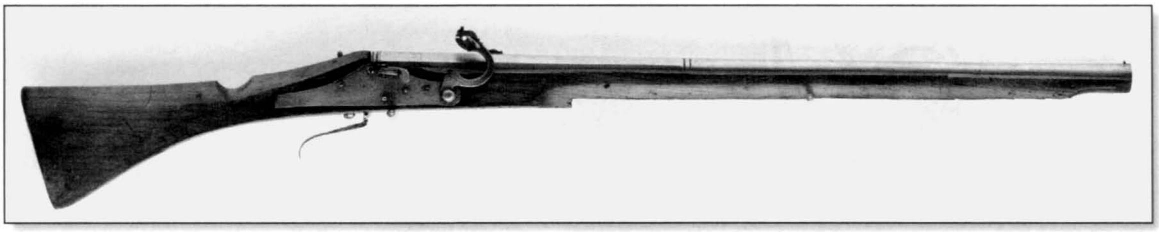


Swedish infantry officer with partisan. (Illustration by Sergey Shamenkov)



Above: Snaphance musket. (Skokloster Castle)

Below: Matchlock musket, mid seventeenth century. Total length 125.5 cm, barrel length 86.4 cm, weight 3.91 kg, and calibre 19 mm. Sufficiently short and lightweight to be used without a fork rest, this type of musket was far more common in the army than the snaphance musket. Note the butt, which is far straighter than in previous muskets (including the snaphance musket illustrated above). The type grew common during the second half of the Thirty Years' War and is typical of Swedish muskets from the 1650s and 1660s. (Royal Armoury, Stockholm)



remaining stock of old, non-regulation muskets were replaced with new muskets of the approved pattern and calibre only in 1655.[107]

Most Swedish infantry muskets were still sturdily built with simple iron fittings. However, by the end of the war, brass fittings might be used for selected units. Notably, on the occasion of Queen Christina's coronation in 1650, her guard carried muskets with brass fittings and stocks painted black, in the German manner, so as to produce the yellow and black colours of the House of Vasa.[108]

By this time, the old-style bandolier with wooden bottles for gunpowder was in the process of being replaced by paper cartridges each containing a measured charge of gunpowder which were stored in a cartridge box. However, there is no specific evidence that the Swedish army took special means to effect this change as a general order. Nonetheless, we can be certain that the switch began under King Charles, at the latest. In comparison, Danish records reveal that in mid 1657 the Copenhagen armoury distributed paper and sailing cloth to make cartridges for Niels Lycke's company of foot.[109]

Those infantrymen who did not carry muskets were armed with pikes. These had a regulation length of 9 cubits (5.35 m). By tradition, a pikeman was valued higher than a musketeer. However, the task of carrying a pike and the associated helmet and armour had long been unpopular with the men. It was not unheard of for pikemen to discard their armour and, if they thought that they could get away with it, cut off the lengths of their pikes to make the load easier to carry. Soldiers had already begun to discard armour during the Thirty Years' War. Most infantry stopped wearing armour altogether. including even the pikemen, who had most reason to retain armour. However, infantry armour and helmets remained part of the soldier's regulation issue. Moreover, armour was still distributed to the army. In 1656, the Stockholm armoury still contained 584 infantry cuirasses and 1,446 infantry helmets. In the same year, the armoury received 115 new such helmets. At the same time, a total of 1,400 helmets were shipped to the armies in Riga and Prussia.[110] Since 800 helmets went to Riga, it seems likely that the remaining 600 were shipped to Prussia.[111]

---

[107] Alm, *Eldhandvapen 1*, p.173.

[108] Alm, *Arméns eldhandvapen*, p.98.

[109] Alm, *Eldhandvapen 1*, pp.187–8.

Rapiers

Each soldier carried a rapier as a sidearm. By the time of the Deluge the old style of rapier with quillons had fallen out of use. Now most rapiers instead had a guard to protect the hand. A typical rapier of the new style, believed to be a cavalryman's rapier from the 1640s, has a blade length of 80.5 cm and a width of 4.0 cm. The hilt is of blackened iron. This style formed the pattern for anew rapier type which is tentatively identified as model year 1653 for common soldiers, since the Department of War (*Krigscollegium*), responsible for the administration of the army, in this year issued the pattern to manufacturers together with a first order of 4,000 rapiers. A surviving rapier believed to have been made according to this pattern has a blade length of 80.5 cm and a width of 4.5 cm, with a weight of 1.42 kg. By this time, rapiers were generally sturdier than before and later and accordingly heavy.[112] There is reason to believe that the same type was distributed to common soldiers in both the cavalry and infantry. In January 1651, the Stockholm armoury had only 52 'cavalryman's swords' (*ryttaresvärd*) but as many as 4,889 'soldier's swords' (*soldatsvärd*). During the year another 4,000 'soldier's swords' arrived from the manufacturer. The records from this time onwards mention large quantities of 'soldier's swords' but no more 'cavalryman's swords'.[113]

Officers carried similar but more ornamented rapiers. The rapier illustrated opposite, worn by renowned Thirty Years' War veteran Field Marshal Carl Gustav Wrangel (1613–1676), derived from the 1640s and was of a type common in the Netherlands. It has a total length of 100.8 cm, a blade length of 85.0 cm, and a width of 3.15 cm. The rapier has a small shell guard to protect the hand. Wrangel is known to have carried the rapier in 1652, since it is illustrated in the equestrian portrait of him reproduced opposite.

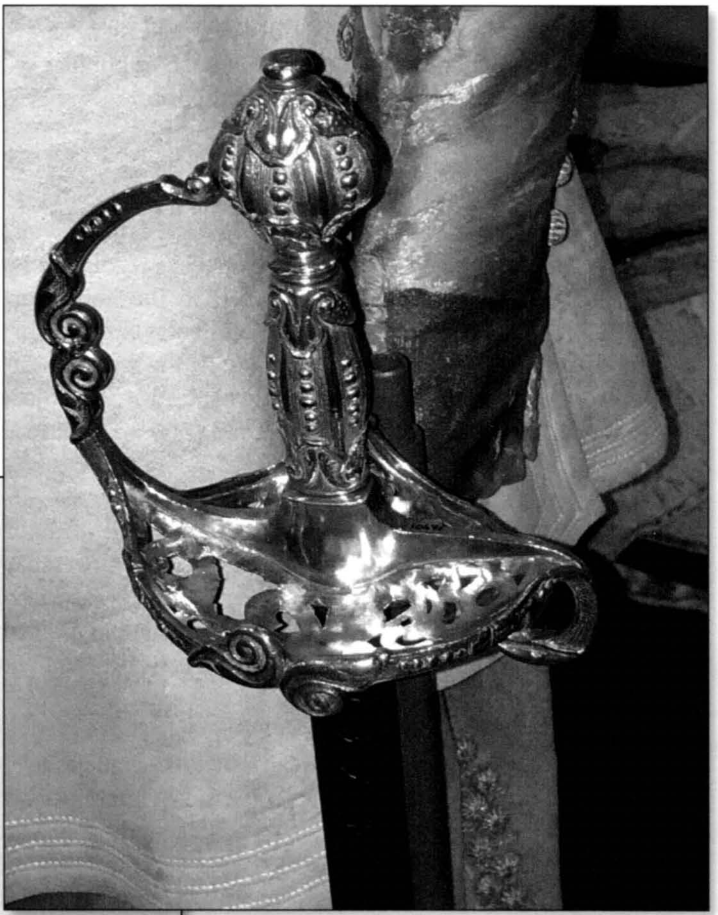
---

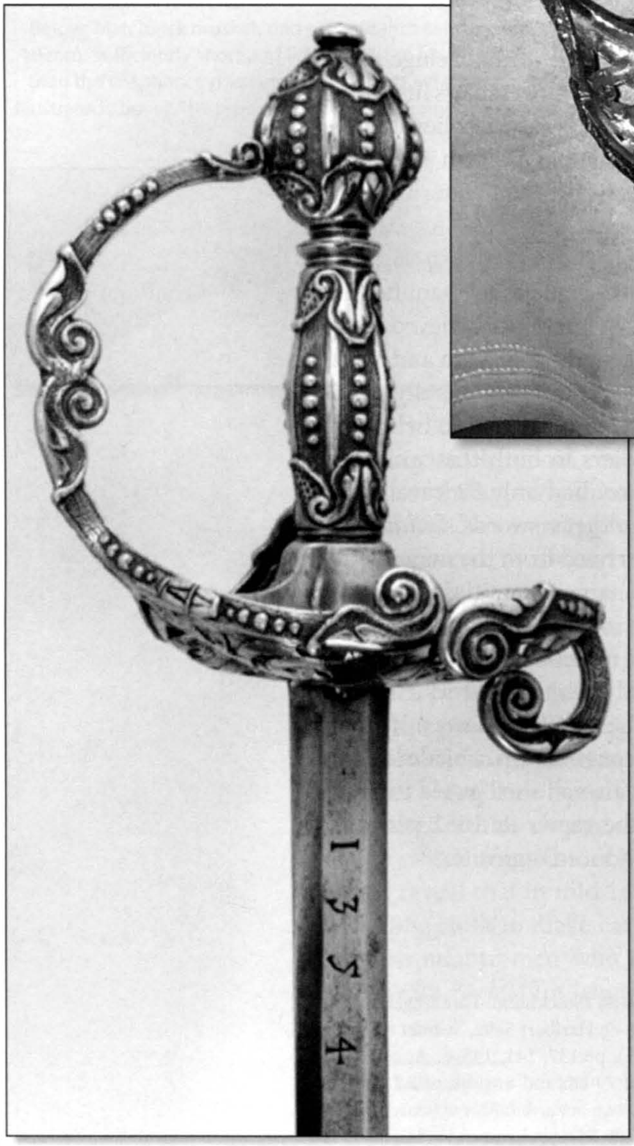
[110] Alm, *Blanka vapen*, p.262.

[111] Fagerlund, 'Kriget i östersjöprovinserna', p.180.

[112] Josef Alm, 'Flottans handvapen', *Sjöhistorisk Årsbok 1953–54* (Stockholm: Föreningen Sveriges Sjöfartsmuseum i Stockholm, 1954), pp.67–147, on pp.78–9; Heribert Seitz, *Svärdet och värjan som armévapen* (Stockholm: Kungl. Armémuseum, 1955), pp.137, 141, 145–6. Another army rapier from roughly the same time has a blade length of 79 cm and a width of 3.7 cm. Seitz, *Svärdet och värjan*, pp.143–5.

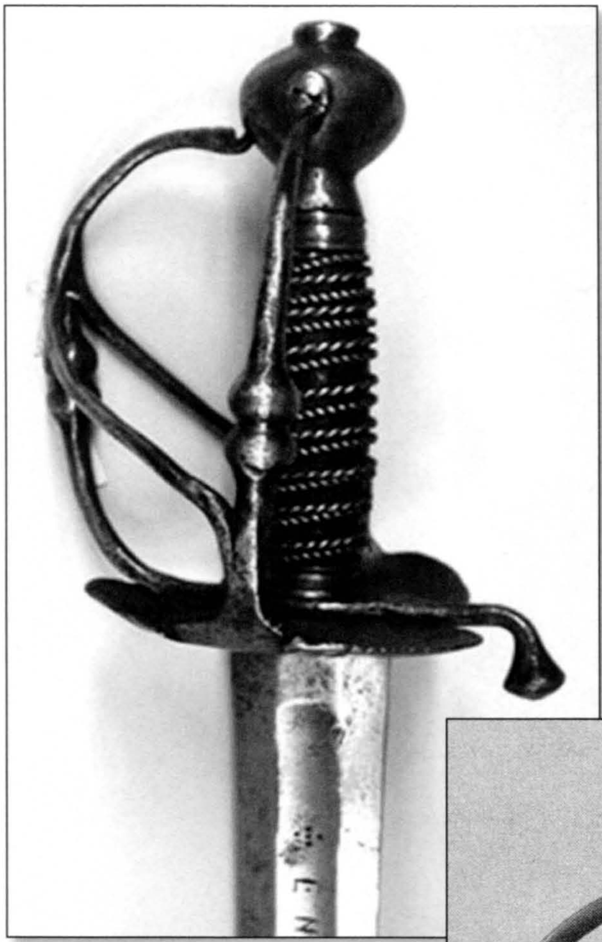
[113] Alm, *Blanka vapen*, p.49.



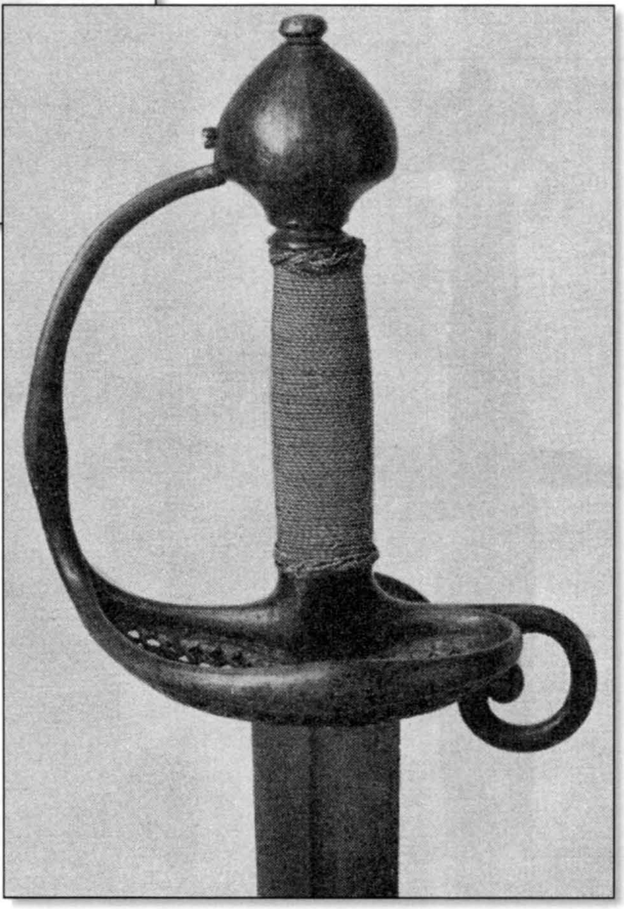


Above: Rapier carried by the future King Charles X Gustavus when he served as cavalry captain, 1642. The two side-rings, the outer one larger than the inner but both fitted with a pierced shell guard, make this an early type of the so-called Walloon sword which subsequently developed into the standard-issue rapier of the Swedish army. (Royal Armoury, Stockholm)

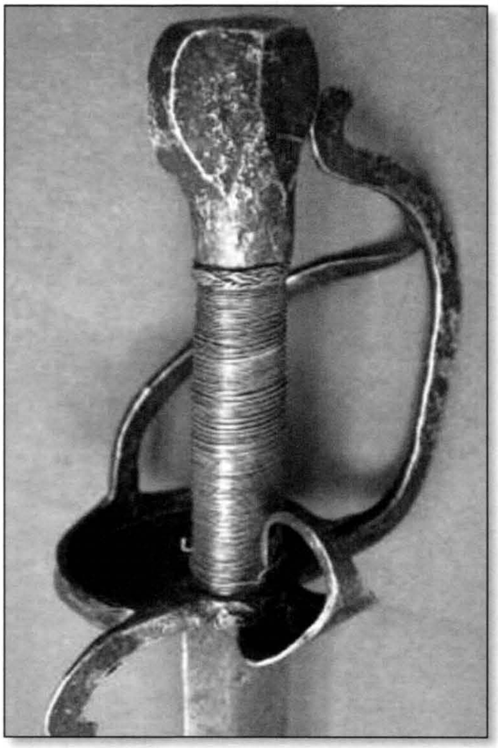
Left: The same rapier carried by the future King Charles Gustavus when he served as cavalry captain, 1642. (Royal Armoury, Stockholm)

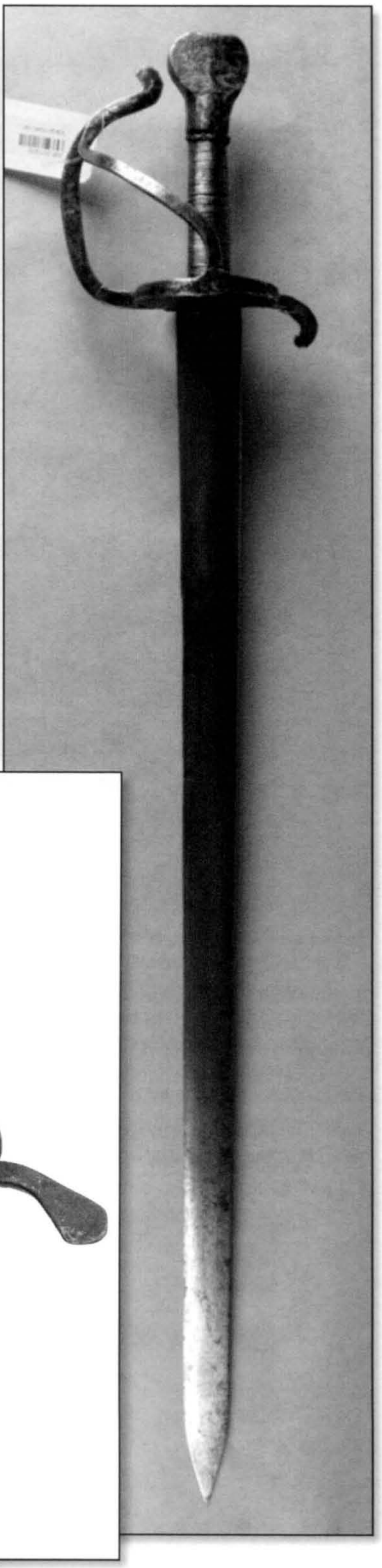


Above: *Schwedendegen*, manufactured in Germany, c. 1650. The double hilt bars distinguish this type from Swedish army-issue rapiers. (Royal Armoury, Stockholm)



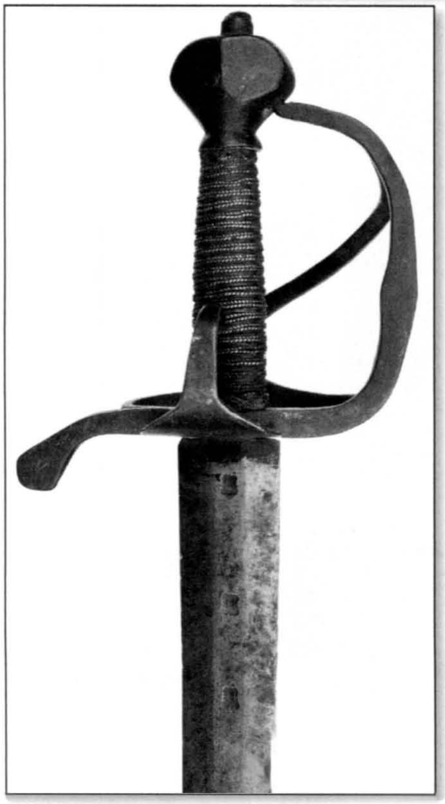
Right: The rapier used by King Charles during his wars in the Commonwealth and Denmark.

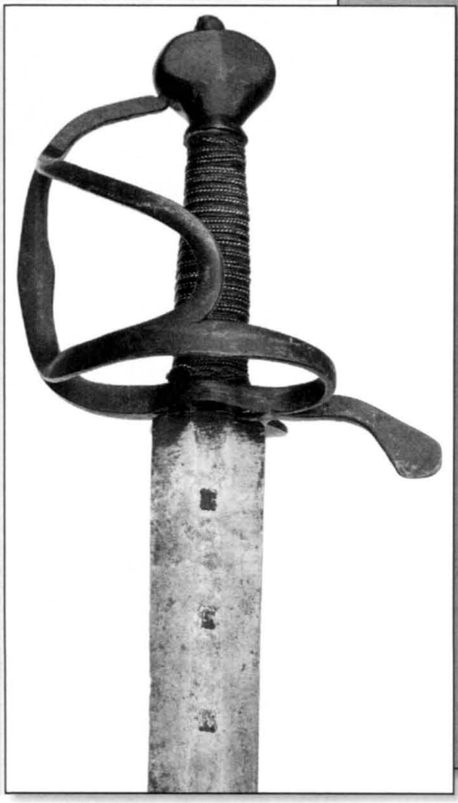


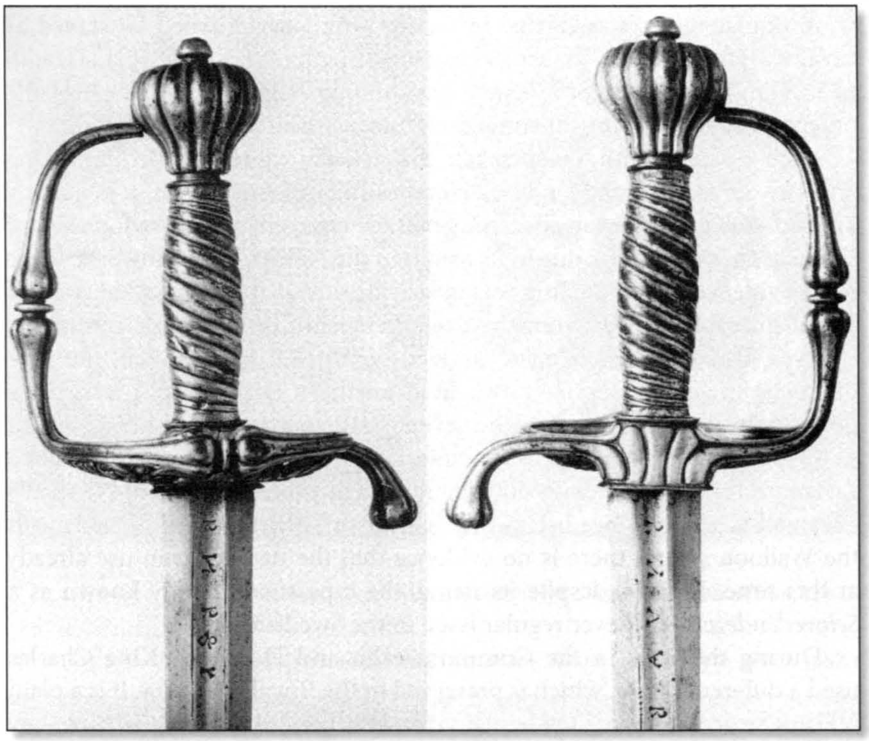


Right: Swedish cavalry rapier, 1640s. (Army Museum, Stockholm; formerly of the private collection of the late Harry Orre)

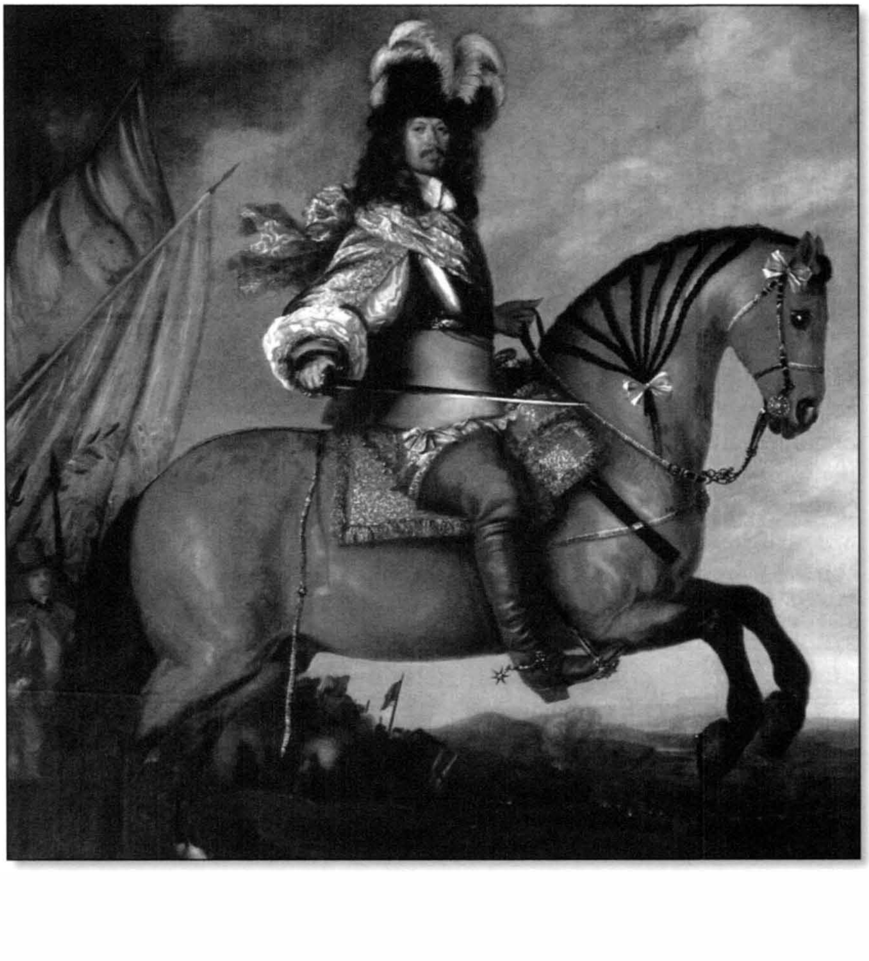
Below: Swedish rapier, mid seventeenth century, identified as model year 1653. (Army Museum, Stockholm, AM 49909)







Carl Gustav Wrangel's rapier. Made in Germany in the 1640s, this is also the rapier depicted in the 1652 portrait of Wrangel by Ehrenstrahl, reproduced below. (Skokloster Castle)



Carl Gustav Wrangel, 1652. (David Klöcker Ehrenstrahl)

A similar rapier was carried by future King Charles when he served as cavalry captain in 1642. The rapier has a total length of 103.2 cm, a blade length of 86.4 cm, and a width of 2.7 cm. It has a thumb ring and two side-rings, the outer one larger than the inner but both fitted with a pierced shell guard.[114]

Such a rapier, with an open hilt that usually came with a thumb ring and two large side-rings, one or commonly both fitted with a frequently pierced shell guard, in time became generally referred to as a 'Walloon sword' (French: *épée wallonne*), due to its origin in the Netherlands. However, there is no evidence that the name was in use already at the time of the Deluge, and it probably derives from the late seventeenth century. It is commonly believed that the French name derives from 1672, but by then, the type had been in general service throughout northern Europe for at least three decades. In the second half of the seventeenth century, the 'Walloon sword' developed into the standard-issue rapier of the Swedish army. Incidentally, a variant of this type, but with double hilt bars to protect the hand, eventually became known as a 'Swedish sword' (German: *Schwedendegen*), but as with the Walloon sword, there is no evidence that the name was in use already at this time. Besides, despite its name, the type subsequently known as a *Schwedendegen* was never regular issue in the Swedish army.

During the wars in the Commonwealth and Denmark, King Charles used a different rapier, which is preserved in the Royal Armoury. It is a plain officer's sword with an equally plain iron hilt. The blade, made in Germany, is 82.7 cm long and has a width of 3.9 cm.[115]

By the time of the Deluge it had become fashionable to hang the rapier from a baldric slung over the right shoulder. Even so, the waist belt remained in use, and it would return into fashion later in the century.

Artillerymen

Artillerymen were armed with muskets and rapiers for personal protection and as a means to protect their cannons.[116]

As noted, 12- and 6-pounders formed the backbone of the field artillery. However, more numerous was the regimental artillery, which consisted of 3-pounders.

Engineers and Sappers

Engineers and sappers used a variety of tools, building and bridging materials, pontoon bridges, and similar equipment. From the 1650s onwards the Crown occasionally supplied Swedish sappers with armour for protection when engaged in siege operations. As far as is known, pieces of discarded cuirassier armour from the Thirty Years' War were used for this purpose. There was no special sapper's armour in Sweden.[117]

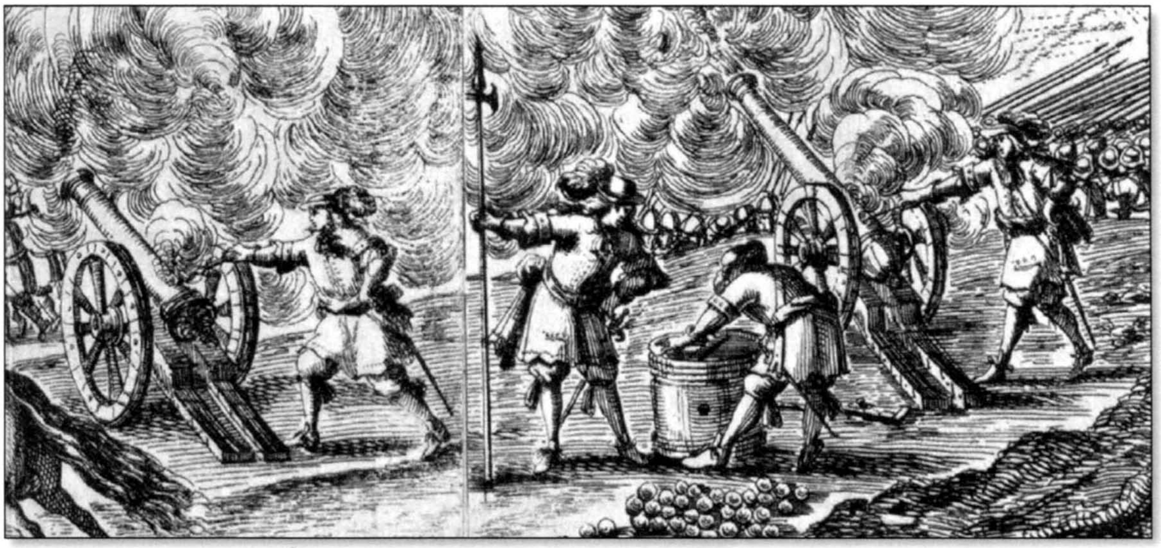
---

[114] *Ibid.*, pp.47–8.

[115] Alm, *Blanka vapen*, p.48; Seitz, *Svärdet och värjan*, p.154.

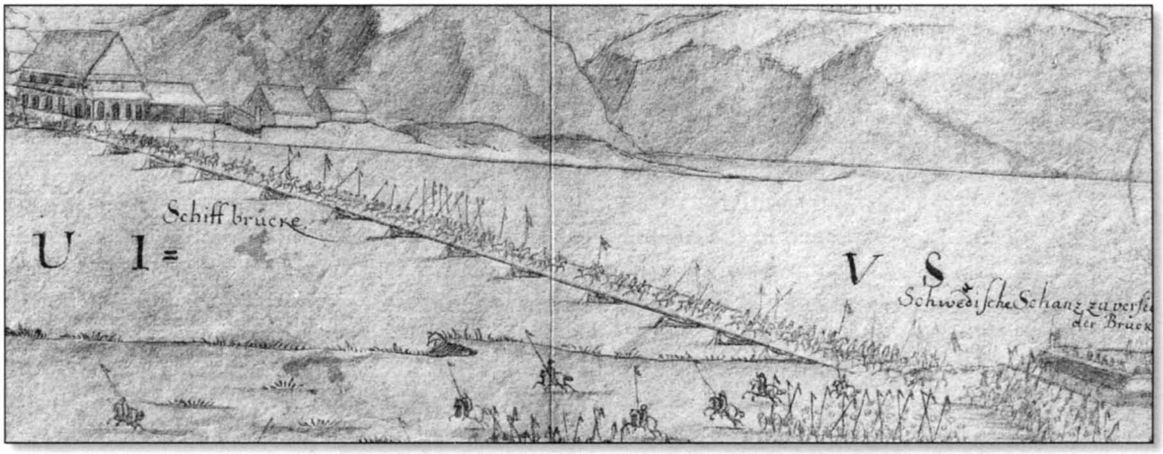
[116] Hedberg, *Kungl. Artilleriet: Yngre vasatiden*, p.80.

[117] Alm, *Blanka vapen*, p.263.



Above: Swedish artillery at Sandomierz, 3 April 1656. (Detail from Erik Dahlbergh)

Below: Swedish pontoon bridge across the Vistula at Zakroczym, March 1657. (Erik Dahlbergh)



Grenadiers

Grenadiers were specialist infantrymen armed with a musket and several grenades each. Over time, the use of explosive grenades grew within the artillery, and it is unsurprising that their use by the infantry increased, too. Grenades intended to be thrown by hand were originally developed for siege work, since grenades enabled the attackers to clear a breach of defenders before exploiting it. Already during the siege of Swedish-held Regensburg in 1634, the Swedish commandant Lars Kagg had set up units armed with grenades. However, these units were temporary and were not retained after the siege.[118] Similar, temporary grenadier units continued to be formed during sieges. At the 1658 siege of Copenhagen, small units of Swedish musketeers were formed who fired grenades fastened to wooden sticks from their muskets.[119] This idea derived from King Charles, according to the noted Imperial field marshal and military theorist Raimondo Montecuccoli who fought in the war.[120] Grenadiers usually threw grenades of the regular 3- or 6-pound calibre type, but they used special incendiary grenades, too.[121] Grenades were made of clay, iron, lead, or copper, of which copper was the most commonly used material in Sweden.[122]

Banners and Music

Banners followed the styles and patterns introduced during the Thirty Years' War. Inspiration for patterns was often provided by the genre of *emblemata*, emblem books, many of which were published in Germany. Infantry colours were usually square in shape with a breadth and length of 1.5–2 m. Cavalry units carried standards of a type known as a cornet. The cornet was usually about 50–55 cm in breadth and 50–70 cm in length and edged with fringe of thread. Based on surviving samples in the Trophy Collection, Stockholm, cornet poles were usually painted, and the cavalry commonly flew their cornet from a fluted lance. Dragoon guidons, finally, had swallowtails. They commonly were about 1 m in breadth and 1.4–1.8 m in length.[123]

In the 1650s King Charles introduced a new system of flags 'in keeping with earlier customs'. The colonel's life company flew a white flag (a practice which had emerged in the Swedish army already during the Thirty Years' War), with the royal cypher or the Swedish arms. Other company flags were issued in the regiment's appropriate provincial colours with devices chosen by the colonel. The innovation, which may have been related to the King's institution of distinct regimental uniforms, seems to be the introduction of flags in provincial colours for the Swedish national regiments.

As before, Swedish infantry units contained drummers and pipers, while cavalry units included kettle-drummers and trumpeters. Cavalry units included a kettle-drummer per cavalry regiment, and such men were included in the units shipped to Pomerania in spring 1655.[124] A possibly new innovation was the infantry kettle-drum cart, with a pair of kettle-

---

[118] Alm, *Eldhandvapen 1*, p.250; Jakobsson, *Lantmilitär beväpning och beklädnad*, 138. On the siege, see Peter Engerisser, 'Eine bisher unbekannte Ansicht der Belagerung Regensburgs im Jahr 1634', *Verhandlungen des Historischen Vereins für Oberpfalz und Regensburg* 148 (Regensburg: Verlag des Historischen Vereins für Oberpfalz und Regensburg, 2008).

[119] Alm, *Eldhandvapen 1*, p.250.

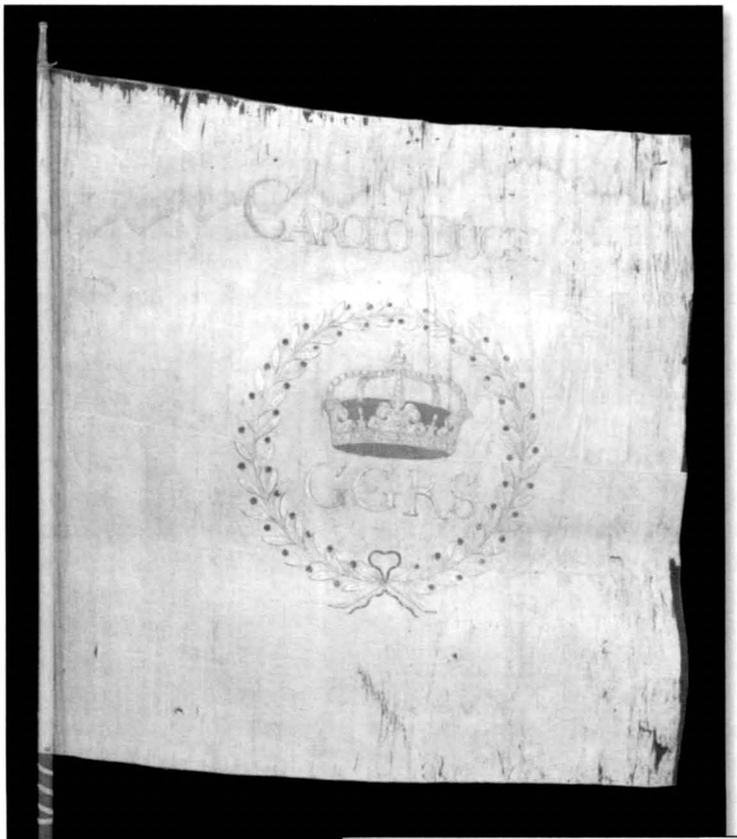
[120] Alm, *Arméns eldhandvapen*, p.114.

[121] Hedberg, *Kungl. Artilleriet: Carl X Gustafs tid*, p.23.

[122] Barkman, Lundkvist, and Tersmeden, *Kungl. Svea livgardes historia* 3:2, p.477.

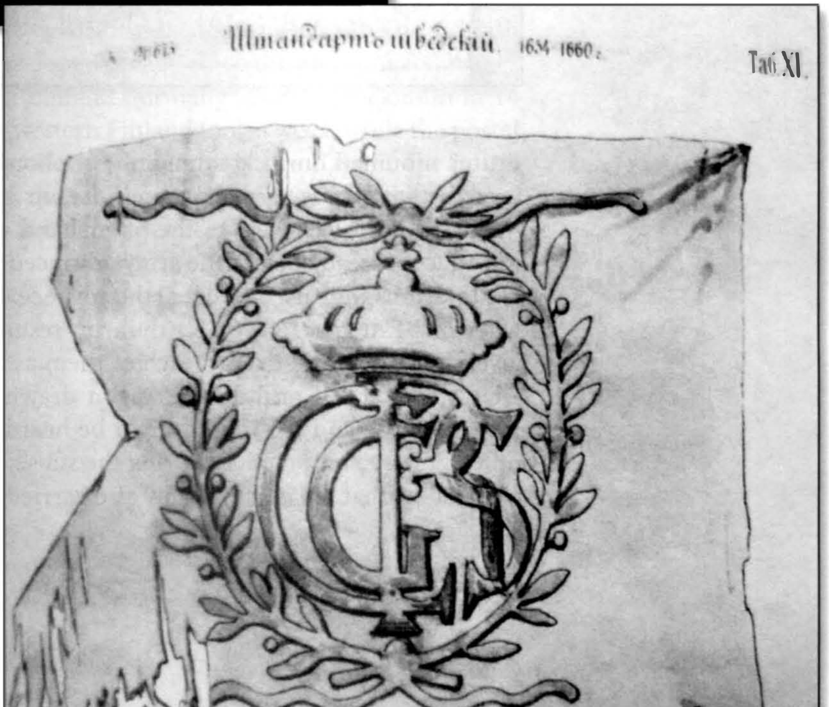
[123] Lars Ericson and Fred Sandstedt, *Fanornas folk: Den svenska arméns soldater under 1600-talets första hälft* (Stockholm Armémuseum, 1982), pp.21–3; Richard Brzezinski, *The Army of Gustavus Adolphus 2: Cavalry* (London: Osprey, Men-at-Arms 262, 1993), pp.39, 41.

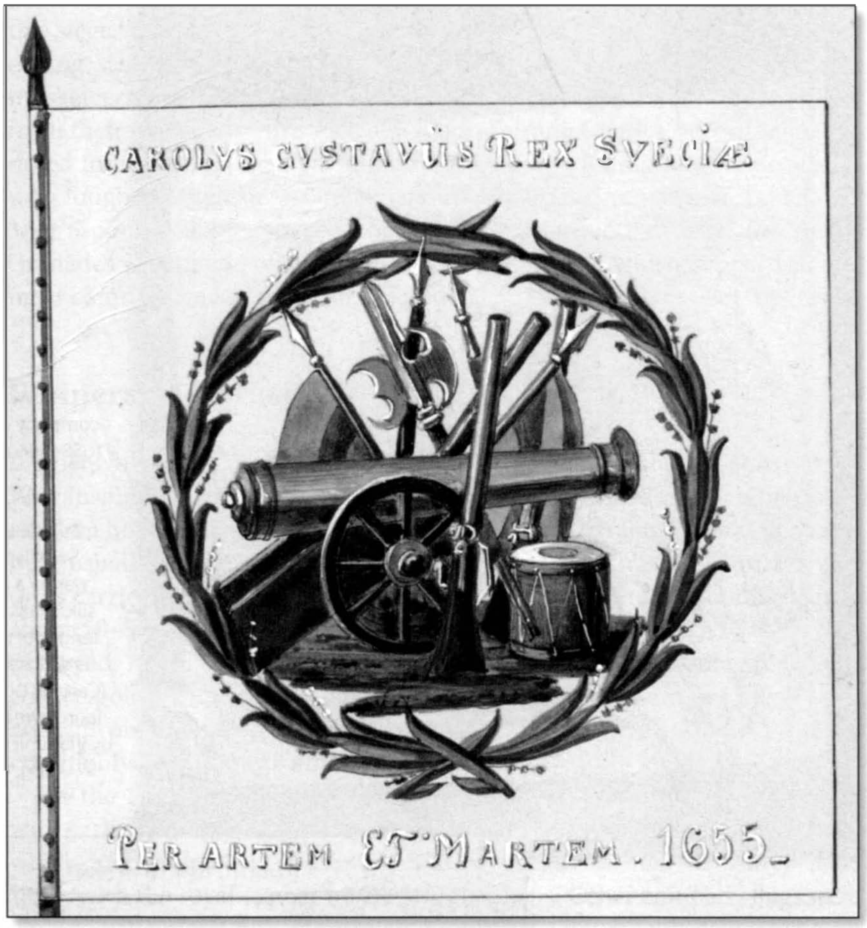
[124] Tersmeden, 'Carl X Gustafs armé: En konturteckning', p.14.



Left: White company colour of the life company of an unknown regiment of foot, 1658–1660. (Army Museum, Stockholm, AM 067877)

Below: Later depiction of an unknown Swedish dragoon guidon taken in the war by a Muscovite unit. Made of yellow silk, it has a breadth of about 97 cm and a length of no less than 136 cm. The guidon is decorated with the royal cypher CGRS (Carolus Gustavus Rex Sueciae) in silver, in a laurel wreath. (Source: depiction identified by Vladimir Velikanov's Oderint Dum Probent blog, <rusmilhist.blogspot.com>)


Штандартъ шведскій. 1654 1660 г.
Таб. XI.



Later depiction of an unknown Swedish infantry colour taken in the war by a Muscovite unit. Made of silk, it has a breadth of about 200 cm and a length of 173 cm. The cloth is described as consisting of four horizontal lines, two pale (the upper and third) and two orange (the second and lowest). The painted devices include green branches and a brown cannon. The upper device is CAROLUS GUSTAVUS REX SVECIAE ('Charles Gustavus King of Sweden') while the lower one is PER ARTEM ET MARTEM 1655 ('Through Art and War 1655'). (Source: depiction identified by Vladimir Velikanov's Oderint Dum Probent blog, <rusmilhist.blogspot.com>)

drums mounted on a cart drawn by six horses. Although such carts were used further east, we have no record of their use in the Swedish army before the wars of the Deluge. On the other hand, they then seem to have been introduced already before the army advanced into the Commonwealth. The kettle-drums were used to signal the advance. Patrick Gordon describes how when on 31 August 1655 (O.S.) 'the army resumed its march, the signal being given by great kettle-drums, each of them as large as nine or 10 hogsheads. They were carried on a broad wagon drawn by six horses: the drummer stood behind, and the sound might be heard at a distance of two German miles.'[125] Based on practices during the subsequent Great Northern War, we can assume that the cart probably also carried a flag.

---

[125] Patrick Gordon, *Passages from the Diary of General Patrick Gordon of Auchleuchries A.D. 1635–1699* (Aberdeen: Spalding Club, 1859), p.21.

Logistics

Logistics was not only the key to waging war, it also formed the daily background to army life. For the soldier, battles were exceptional events in a lifestyle that was centred on seemingly eternal marches back and forth across the country, the gathering of provisions and supplies, and longer or shorter stays in quarters of different kinds and standards. When possible, two days of march were followed by one day of rest, to enable repairs, the return of stragglers and scouting parties, and to gather supplies. The Swedish army focused on what has been called offensive logistics: the deliberate invasion of hostile but not yet plundered areas which were then exploited either by direct occupation accompanied by billeting and/or plundering or by the indirect form of extortion known as contributions, in cash and goods (food, clothes, munitions, and transportation), in exchange for being left alone. The system of raising contributions had grown increasingly sophisticated during the Thirty Years' War, since army commands soon learnt how to tap into existing fiscal structures to divert what was supposed to have been public funds into the war chests of their armies. However, the system was detrimental to military efficiency in so far that it depended on the detachment of garrisons that held ground and ensured the continued flow of contributions. These garrisons were then unavailable for field operations.

Cavalry had logistical demands that exceeded those of the infantry, since, first, horses had to be supplied, and, second, the horses, too, needed equipment and fodder. At least the cavalry enjoyed a greater mobility and range in its own foraging capability.

Logistics also included the safeguarding of communications. The Swedish domestic postal service had developed greatly since the Thirty Years' War.[126] A letter from Viborg in eastern Finland normally reached Stockholm in 14 days. The same letter to Åbo in western Finland took a week, while the postal service from Viborg to Nyen or Kexholm took only two days.[127] The postal service abroad functioned well, too, although there was always the risk that letters would be intercepted by Sweden's enemies.

---

[126] Fredholm von Essen, *Lion from the North*, vol. 1, pp.232–3.

[127] Lappalainen, 'Finland', p.12.

Table 1 (see p.73). The National Regiments, 1654

Sources: primarily Tersmeden, 'Carl X Gustafs armé: En konturteckning', 11; Tersmeden, 'Carl X Gustafs armé 1654–1657', p.236)

Note: some regiments also included additional, temporary companies deployed in various locations. Incidentally, the Åbo Cavalry Regiment in time became known as the Åbo and Björneborg Cavalry Regiment. Likewise, the Tavastehus Cavalry Regiment became the Nyland and Tavastehus Cavalry Regiment, while the Viborg Cavalry Regimenti became the Viborg and Nyslott (Karelian) Cavalry Regiment. The Värmland Regiment in time became known as the Närke-Värmland Regiment.

Regiment	Geographical area	Coy
Cavalry		
The Retinue of Nobles (*Adelsfanan*)	Sweden and Finland (4 Swedish coy, 1 Finnish coy)	5
	Core units also in Estonia, Ingria, Livonia, Pomerania, Bremen-Verden	
Uppland Cavalry Regiment (*Upplands regemente till häst*)	Central Sweden	8
Västgöta Cavalry Regiment (*Västgöta regemente till häst*)	Västergötland and Dal, Sweden	8
Åbo Cavalry Regiment (*Åbo läns regemente till häst*)	Åbo and Björneborg (Satakunta) Counties, Finland	8
Småland Cavalry Regiment (*Smålands regemente till häst*)	Småland and Öland, Sweden	8
Tavastehus Cavalry Regiment (*Tavastehus läns regemente till häst*)	Tavastehus and Nyland, Finland	8
Östgöta Cavalry Regiment (*Östgöta regemente till häst*)	Östergötland and Södermanland, Sweden	8
Viborg Cavalry Regiment (*Viborgs läns regemente till häst*)	Viborg och Nyslott Counties, Finland	8
Livonian and Ingrian Cavalry (*Landsåtar i Liv- och Ingermanland*)	Livonia and Ingria	6
Dragoons		
Karelian Dragoon Regiment (*Karelska dragonregementet*)	Viborg och Nyslott Counties, Finland	8
Infantry		
His Royal Majesty's Life Guard (*H. K. M:ts Livgarde*)	Sweden and Livonia (enlisted throughout the realm)	14
Uppland Regiment (*Upplands regemente*)	Uppland, Sweden	10
Skaraborg Regiment (*Skaraborgs läns regemente*)	Skaraborg County, Sweden	8
Åbo Regiment (*Åbo läns regemente*)	Åbo County, Finland	9
Södermanland Regiment (*Södermanlands regemente*)	Södermanland, Sweden	9

Regiment	**Geographical area**	**Coy**
Kronoberg Regiment (*Kronobergs läns regemente*)	Kronoberg County, Sweden	9
Jönköping Regiment (*Jönköpings läns regemente*)	Jönköping County, Sweden	9
Björneborg Regiment (*Björneborgs läns regemente*)	Björneborg County (Satakunta), Finland	11
Dalecarlia Regiment (*Dalregementet*)	Dalecarlia and Bergslagen, Sweden	8
Östgöta Regiment (*Östgöta regemente*)	Östergötland, Sweden	9
Tavastehus Regiment (*Tavastehus läns regemente*)	Tavastland, Finland	9
Hälsinge Regiment (*Hälsinge regemente*)	Hälsingland and Gästrikland, Sweden	8
Västgöta-Dal Regiment (*Västgöta-Dals regemente*)	Dal, Sweden	8
Elfsborg Regiment (*Elfsborgs läns regemente*)	Elfsborg County, Sweden	8
West Viborg Regiment (*Östra Viborgs läns regemente*)	West Viborg County (Karelia), Finland	9
East Viborg Regiment (*Västra Viborgs läns regemente*)	East Viborg County (Karelia), Finland	9
Savolax Regiment (*Savolax regemente*)	Savolax, Finland	9
Västmanland Regiment (*Västmanlands regemente*)	Västmanland, Sweden	8
Västerbotten Regiment (*Västerbottens regemente*)	Norrbotten and Västerbotten, Sweden	8
Kalmar Regiment (*Kalmars regemente*)	Kalmar County and Öland, Sweden	8
West Nyland Regiment (*Västra Nylands regemente*)	West Nyland, Finland	9
East Nyland Regiment (*Östra Nylands regemente*)	East Nyland, Finland	9
Värmland Regiment (*Värmlands regemente*)	Närke and Värmland, Sweden	9
Österbotten Regiment (*Österbottens regemente*)	Österbotten, Finland	10
Ångermanland Regiment (*Ångermanlands regemente*)	Ångermanland, Medelpad, and Jämtland, Sweden	8
Viborg Battalion (*Viborgs läns skvadron*)	Viborg County (Karelia), Finland	4

Table 2 (see p.75). Composition of a Swedish Cavalry Company

Sources: Hamilton, *Afhandling*, p.214; muster rolls cited in Rumenius, *Wästgöta Ryttare*, p.25, pp.57–63)

Position	Men	Horses
Captain (Swedish: *ryttmästare*; German: *Rittmeister*)	1	4
Lieutenant	1	3
Ensign (Cornet; Swedish: *kornett*)	1	3
Furier (Swedish: *furerare*)	1	2
Corporals	2–3	4–6
Chaplain	1	1
Muster-roll Scribe	1	1
Quartermaster	1	1
Barber-Surgeon	1	1
Trumpeter	1	1
Farrier	1	1
Provost (Swedish: *profoss*; German: *Profoß*)	1	1
Cavalrymen	100	100
Total	113–114	123–125

Table 3 (see p.75). Composition of a Swedish infantry company, to which at times would be added four clerical servants and five supernumeraries in anticipation of losses.

Sources: *Swedish Discipline* vol. 3, pp.76–77; Troupitzen, *Kriegs Kunst*, pp.4–10; Hamilton, *Afhandling*, p.132; Petri, *Kungl. Första livgrenadjärregementets historia* vol. 2, p.10; Barkman, *Gustaf II Adolfs regementsorganisation*, p.219.

Position	Number
Captain	1
Lieutenant	1
Ensign	1
Sergeants	2
Armourer	1
Furier (Swedish: *furerare*; a sergeant with added duties)	1
Company Standard bearer	1
Muster-roll Scribe	1
Drummers	3
Corporals (2 pikemen, 4 musketeers)	6
Pikemen	46
Musketeers	92
Total	156

Table 4 (see p.75). Composition of a Swedish Infantry Field Regimental Staff

Sources: *Swedish Discipline* vol. 3, p.76; Petri, *Kungl. Första livgrenadjärregementets historia* vol.2, p.9; Barkman, *Gustaf II Adolfs regementsorganisation*, p.219.

Note that the colonel, lieutenant colonel, regimental sergeant major, and regimental quartermaster also acted in the capacity of company commanders. As for the lower positions, some variations existed depending on the regiment.

Position	Number
Colonel	1
Lieutenant Colonel	1
Regimental Sergeant Major (*regementsvaktmästare*)	1
Regimental Quartermaster	1
Regimental Scribe	1
Regimental Chaplain	1
Chaplains	3
Regimental Barber-Surgeon	1
Barber-Surgeons	3
Regimental Provost	1
Provosts (Swedish: *profoss*; German: *Profoß*)	3
Military Court Scribe (*rättegångsskrivare*)	1
Military Court Sergeant (*rättegångsväbel*)	1
Total	19

Table 5 (see p.90). Sweden's Military Establishment, June 1654

Sources: Tersmeden, 'Carl X Gustafs armé 1654–1657', pp.220, 236–8; Hedberg, *Kungl. Artilleriet: Yngre vasatiden*, p.11.

Available for Field Duty	Cavalry	Dragoons	Infantry
Sweden	4,835	-	15,520
Finland	3,455	1,030	5,200
Livonia and Ingria	820	-	-
Totals	9,110	1,030	20,720
Garrison Duty			
Sweden	-	-	2,105
Ingria	-	-	1,255
Estonia	-	-	145
Livonia	-	-	6,125

Pomerania	-	-	2,215
Wismar	-	-	650
Bremen-Verden	-	-	1,830
Totals	-	-	14,325
Grand Total	9,110	1,030	35,045
Artillerymen			approx. 1,000
Sailors			approx. 6,000
Total Manpower			52,185

Table 6 (see p.91). Swedish Military Strength Outside Germany, First Half of 1655

Sources: Tersmeden, 'Carl X Gustafs armé 1654–1657', pp.180, 252; Fagerlund, 'Kriget i östersjöprovinserna', p.224),

Note that the figures derive from roll calls and similar documents but not always from the same date. Moreover, they include the Livonian field army of 7,200 men which later moved into Lithuania.

Available for Field Duty	Cavalry	Dragoons	Infantry
Sweden	1,505	-	4,555
Finland	85	-	760
Livonia	4,400	600	4,000
Garrison Duty			
Sweden	-	-	1,735
Finland	-	-	hardly any
Ingria	-	-	990
Estonia	-	-	145
Livonia	-	-	5,800
Grand Total	5,990	600	17,985

Table 7 (see p.95). Uniforms of the Provincial Dragoon and Infantry Regiments, 1655

Source: Asker, 'Svenska uniformsförteckningar', pp.95–6). Note that reconstructed colour combinations are marked with question marks.

Regiment	Coat	Breeches
Dragoons		
Karelian Dragoon Regiment	Blue	Blue
Infantry		
Uppland Regiment	Red	Red
Skaraborg Regiment	Reddish brown	Reddish brown
Åbo Regiment	Red?	Red?
Södermanland Regiment	Blue	Blue
Kronoberg Regiment	Red	Yellow
Jönköping Regiment	Red	Blue
Björneborg Regiment	Red	Red
Dalecarlia Regiment	Red	Green
Östgöta Regiment	Blue	Red
Tavastehus Regiment	Red	Red
Hälsinge Regiment	Blue	Blue
Västgöta-Dal	Green	Red
Elfsborg Regiment	Reddish-brown	Blue
West Viborg Regiment	Blue	Blue
East Viborg Regiment	Blue?	Blue?
Savolax Regiment	Blue?	Blue?
Västmanland Regiment	Sea-green	Sea-green
Västerbotten Regiment	Blue	Blue
Kalmar Regiment	Brown	Blue
West Nyland Regiment	Red?	Red?
East Nyland Regiment	Red?	Red?
Värmland Regiment	Green	Red
Österbotten Regiment	Blue	Brown
Ångermanland Regiment	Blue	Yellow
Viborg Battalion	Blue?	Blue?

3

The Commonwealth Military Establishment

The Commonwealth was the product of a meeting of Eastern and Western cultural, military, political, and religious ideas. Since the Middle Ages, the Polish nobility had grown increasingly close to their western, primarily German neighbours and adopted many of their customs. At the same time, major parts of the Commonwealth, in particular Lithuania and Ruthenia, remained part of an Eastern cultural, military, and religious tradition. This was obvious in the case of religion, which was Orthodox Christianity that looked to the east, not the west. Less obvious to the casual observer, but of no less importance, were the strong military influences inherited from the Mongol Empire and its successor states. Even so, Lithuanian and to some extent Ruthenian nobles, too, followed in the footsteps of their Polish peers, accepted polonisation, often converted to Catholicism, and over time grew closer to the German West than the Tatar East.

The complex mixture of Eastern and Western traditions was obvious in the Commonwealth's military affairs. With the exception of some enlisted units which fought in the Continental manner adopted from Germany, the Commonwealth's military forces employed forms of organisation and types of tactics which differed radically from the Swedish model. Essentially, the Commonwealth's traditional military remained greatly influenced by the Inner Asian cavalry tactics habitually employed by Eurasian steppe nomads, notably those of the mediaeval Mongol Empire and its successor states. Its core was formed by heavy cavalry, supported by highly mobile horse archers, or the traditional equivalents thereof in the form of Tatar, Wallachian, or 'Cossack' light cavalry.[1] Incidentally, we will see that 'cossack' (Polish: *kozak*) was the customary term for any cavalry not labelled hussar, nor identified by an ethnic label, for which reason most Commonwealth light cavalry were called cossack-style.

---

[1] The most easily accessible general treatise of the Commonwealth military establishment in English remains the excellent Richard Brzezinski, *Polish Armies 1569–1696* (London: Osprey Men-at-Arms Series 184 and 188, 2 vols, 1987). Then there is Michał Paradowski's recently published *Despite Destruction, Misery and Privations … The Polish Army in Prussia during the War against Sweden 1626–1629* (Warwick: Helion, 2020) although it focuses on the earlier developments of the seventeenth century, not those of the Deluge.

The Commonwealth's military forces were divided into two distinct organisations: the Army of Poland, also known as the Crown Army, and the Army of Lithuania, also known as the Grand Ducal Army. Although both were under the authority of King John Casimir, since he was simultaneously King of Poland and Grand Duke of Lithuania, the two armies had separate chains of command of often experienced co-ordination problems.

Until its recent destruction at the hands of a combined force of Tatars and cossacks at Batog in 1652, the foundation of the state armies had been the *Kwarciani* or 'Quarter' army, so called after the quarter share (Polish: *kwarta*) of the royal revenues technically set aside for its maintenance.[2] However, after the disaster at Batog the second parliament of 1652 abandoned this system in favour of a more flexible model organised on a territorial basis and paid from local sources.[3] This was the *Komput* (adjective *komputowa*) or 'Number' army. Perhaps a better term would be the establishment-strength army, since it was based on a notional military establishment strength which was expected to be realised as soon as parliament made funding available. Parliament decided, through its funding decisions, the size of the notional establishment strength for each province (Polish: *województwo*, a term in English variously translated as a voivodeship or palatinate; each was governed by a voivode or palatine, *wojewoda*). After parliamentary approval, the provinces were supposed to collect and distribute the funding to the army. Although in theory a more up to date and responsive funding system, in actual practice the Komput system, too, was imperfect. While the old Quarter army had lived – inadequately – on a fixed income, the new Komput army subsisted – precariously – at the mercy of parliamentary approval and provincial administrative honesty and efficiency.

The Komput strength was calculated in 'horses' for cavalry and dragoons and in 'portions' for infantry. These were units for calculation only, and the actual number of horses and men never reached the totals. Nonetheless, most surviving records are expressed in these units, which can be taken as an approximation of the number of men expected for a given unit's establishment strength. Most historians as a rule of thumb deduct up to15 percent of the Komput strength to estimate the actual number of horse and foot.

With the introduction of the Komput reform, the Grand Duchy of Lithuania, too, acquired a Komput army. Lithuania was not as wealthy as Poland, so its Komput army commonly was only between a third and half the size of the Crown Army. The Grand Ducal Army contained fundamentally the same types of units as the Crown Army, but there was a slight difference in emphasis. Essentially, the Lithuanian Army remained more Eastern in character than the Crown Army, with a higher share of light cavalry and fewer modern units of the German type. The difference in emphasis and character should not be exaggerated, however. Unlike the Polish nobility, which occasionally dressed in Western European dress (in particular when they went abroad), the Lithuanian nobility only seldom did. This, and the larger share of Tatars, Circassians, and other easterners in the Lithuanian Army, often prejudiced observers from more western realms against it.[4] The similarities between the Polish and Lithuanian armies were far greater than the differences.

---

[2] Introduced in 1562–1563 as a means to finance the army, the quarter was already in 1567 reduced to a fifth. Subsequently, it continued to be levied at the same, fixed rate, regardless of ongoing inflation which over time greatly reduced the money value of what once had been intended as a quarter of real total revenues. It was only the Polish Crown which had a quarter army; Lithuania never had one, nor any other standing force under Commonwealth control.

[3] The term *Kwarciani* did not go away quite as rapidly as the organisation; by the time of the Deluge, most foreign observers still referred to the soldiers of the Polish Crown army as *Kwarciani*.

In addition to the Komput army, the Commonwealth military establishment included a panoply of other forces. Of most interest to the King was the Royal Guard, which was the King's small private army. However, there were also the standing garrisons of certain fortresses, the independent armies of cities and major towns, and the private armies of the magnates (the wealthier nobles). Units of unpaid volunteers often played a major role, too, serving not for pay (since they did not receive any) but for the right to plunder the supposedly enemy territories through which they passed. As might be expected, these freebooters were poorly disciplined and often caused major disruptions. On occasion, 'district soldiers' were raised locally as needed, as the availability of funding allowed and the district parliament (*sejmik*; 'small parliament') permitted. Peasant and townsman levies could be raised, too. Those men raised from the towns served as infantry, while those raised in the country generally served as mounted soldiers.

Finally, there were the peasants. At times, they would play a significant military role, banding together as irregular guerrillas to ambush soldiers in retaliation for the depredation they had suffered. However, it was impossible to direct the activities of peasant irregulars to military targets only, since their attacks often degenerated into the indiscriminate slaughtering of anybody of different religious faith or ethnic background. Likewise, it was seldom easy to distinguish between those motives which inspired religious fervour, such as the incursion of presumably heretic foreigners, and those which resulted in peasant uprisings against the gentry, who sometimes were also regarded as foreigners (that is, Polish gentry in Ruthenia and German gentry in western Poland). Unlike in Germany and parts of Western Europe, where religious hatreds had been somewhat blunted through the shared horrors of the Thirty Years' War, in Eastern Europe the clergy continued to preach hatred between Protestant,

---

[4] This cultural issue, which falls beyond the scope of this work, was in the seventeenth century noticeable with regard to other Eastern armies, too, and derived from a combination of contemporary war propaganda and the lingering influences of accounts by classical authors of Asian invaders which went all the way back to the ancient Greek accounts of the fifth-century BC Persian invasion of Greece. Fundamentally, the idea was that the further to the east a people lived, the more savage and 'Asian' it was in its behaviour. In addition to the prejudice that Lithuanian soldiers were more savage than Polish ones, there was an equally mistaken belief that the Finnish soldiers of the Swedish army were more savage than their Swedish compatriots, and that Muscovites were more beastly still. See, for example, Michael Fredholm von Essen, *Lion from the North*, vol. 1, pp.141–2; Michael Fredholm von Essen, *Muscovy's Soldiers: The Emergence of the Russian Army 1462–1689* (Warwick: Helion, 2018), pp.68–70.

Catholic, and Orthodox Christians and between these and non-Christians such as Jews. In this regard, there was little difference between the Commonwealth and Muscovy in both of which such behaviours remained common.

Poland had a king, but he was elected, kingship was not hereditary, and royal powers were limited. The Commonwealth perceived itself to be not a kingdom but a republic of nobles. The key interest of the nobility (*szlachta*, a term likely derived from German *Geschlecht*, 'family' or 'clan' although other hypothetical explanations have been suggested) was to preserve traditional noble liberties, that is, the right of every nobleman, however poor, to abstain from following the orders of autocratic kings. Incidentally, this also meant that there was widespread opposition to the formation of a regular army, in particular one based on the lowly infantry, since a standing army was regarded as the tool of the Crown and accordingly, through its very existence, an existential threat against noble liberties.

Tactical Doctrines

The Commonwealth army was primarily a cavalry army. By tradition, the cavalry was divided into 'hussars' (*husaria*; armoured cavalry) and 'cossacks' (*jazda kozacka*; in effect everything else, since in this context the term only signified a non-hussar horseman, not necessarily a Ukrainian cossack). As the Commonwealth cossack-style cavalry grew heavier and wore increasingly more armour, a new class of cavalry, known as 'light cavalry' was introduced in the late 1640s based on models from Wallachia.

The traditional troop types of the Commonwealth military employed no formal tactical doctrine. Instead, the different troop types fought in their respective customary manner. The hussars fought as shock cavalry, while the cossack-style and light cavalry employed traditional steppe tactics, including feigned flights and other types of disruptive attacks to soften up the enemy and the provision of flank cover to the shock cavalry. They also played an important role in reconnaissance and foraging.

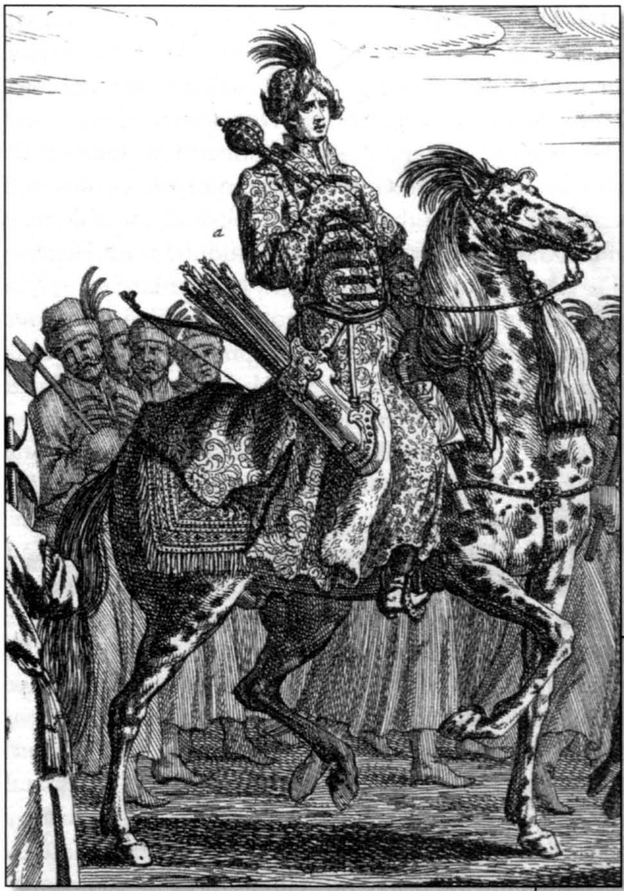
A Commonwealth cavalry army customarily drew up in half-moon array, with light cavalry on the flanks where it was deployed in a forward position, heavy cavalry in the centre where it was held back until the decisive charge, and any infantry and artillery deployed in-between the units of horse. This is certainly how contemporary observers such as Erik Dahlbergh depicted traditional Commonwealth cavalry units. The Lithuanian cavalry, with its higher share of Tatar and Circassian cavalry, may have fought in even looser formations than the Polish cavalry. However, this should not be interpreted as a lack of an order of battle. By tradition, a Commonwealth army deployed in what was known as the 'Old Polish Order'. In reality, this was a remnant of the Mongol division of armies into five tactical units: vanguard, main force, left and right wings, and rearguard. The same order of battle was used by Muscovites, Tatars, and others who had emerged from the same tradition. While this array remained in use in the Commonwealth's cavalry armies, the Deluge gradually taught Commonwealth commanders the need for modern troop types and

Sabre of Ottoman origin owned by Jan Zamoyski, with a hilt covered in gilt silver and decorated with turquoises. Total length 102.0 cm, blade length 88.5 cm, and blade width 3.9 cm. Captured by Carl Gustav Wrangel from Jan Zamoyski during the disengagement of Zamoyski's Regiment of Foot on the third day of the 1656 battle of Warsaw. When too many Poles attempted to cross the only available bridge over the River Vistula at the same time, part of the bridge collapsed and Zamoyski, together with Crown Grand Hetman Stanisław 'Rewera' Potocki, almost drowned. (Skokloster Castle; photo: Erik Lernestål)

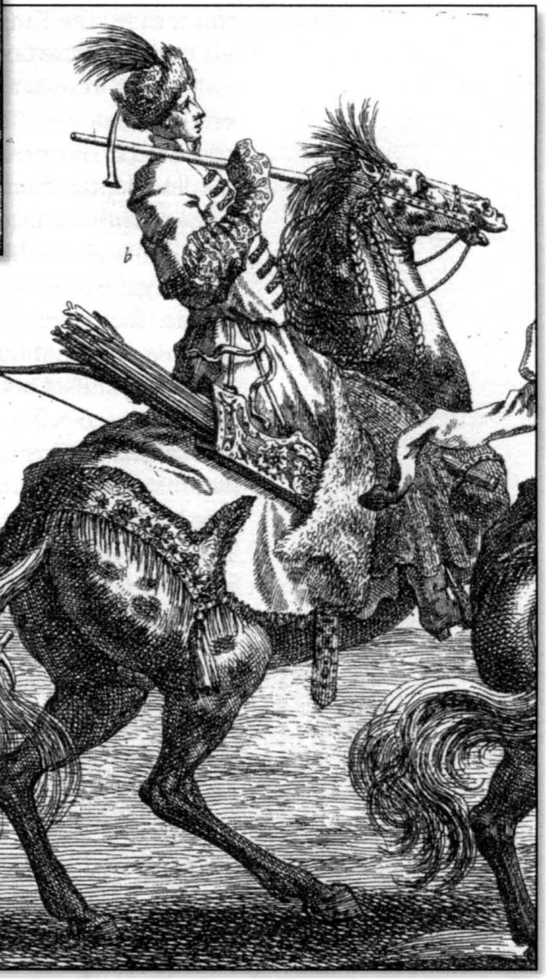
deployment. Hence, King John Casimir eventually began to divide his field armies into three divisions, each of which was called a *korpus* ('corps').

The Commonwealth cavalry regarded itself as the key arm of any army. In particular in the early years of the Deluge, Commonwealth commanders still believed that a shock by the hussars would defeat any enemy, in particular after he had been softened up by cossack-style and light cavalry. The fallacy of this idea had become obvious already in the war with Sweden in the 1620s, but this harsh lesson had been forgotten and had to be relearned.

The Deluge also reminded the Commonwealth commanders of the need for modern infantry. Earlier in the century, infantry, regardless of type, was by tradition strictly used for holding or attacking fortifications or for the provision of fire support to the cavalry. Infantrymen were not expected to fight on an open field, and they were certainly not expected to gain honour at the expense of the cavalry. For this reason, it took the frequent defeats against Swedish King Gustavus Adolphus in the 1620s to convince Commonwealth officers that, despite their preferences, infantry armed with pikes were useful, in particular when fighting in the open. As a result, the Commonwealth began to reorganise some infantry as mixed pike and shot, in the manner of the Swedish enemy. This lesson was not forgotten, and by the time of the Deluge the more modern Commonwealth armies, such as those maintained by King John Casimir, made considerable use of infantry which operated in a similar manner to German and Swedish units.



Above:: Commonwealth officer with spherical mace (*buława*), the symbol of command, and the customary bow, arrow, and pistol combination. Depiction of an officer from the carousel (tournament) held at the 1672 accession to the throne of King Charles XI. Although the carousel took place in Sweden, with mostly Swedish participants and more than a decade after the Deluge, the Crown took care to make the foreign contingents as realistic as possible. Suitable weapons and equipment were borrowed from the Royal Armoury, including a full set of of weapons in 1626 presented to King Gustavus Adolphus as a gift from Prince Gábor Bethlen of Transylvania. Many participants in the carousel had fought in the Commonwealth and knew its styles of dress and armament. Some, no doubt, had brought back souvenirs which now came in handy. Moreover, at least one Polish noble in Swedish service, Lieutenant Colonel Zacharias Gamoiski (1620–1679), performed in the carousel. (David Klöcker Ehrenstrahl, *Certamen equestre*, 1672)



Right: Cavalryman dressed in thick fur coat, armed with war hammer, bow, arrows, and pistols. (David Klöcker Ehrenstrahl, *Certamen equestre*, 1672)

Organisation and Training

We have already seen that the Commonwealth fielded two military establishments: the Crown Army of Poland and the Ducal army of the Grand Duchy of Lithuania. The King and Grand Duke appointed four individuals as commanders of his two armies. The Grand Hetman of the Crown and the Field Hetman of the Crown commanded the Polish army.[5] Likewise, the Grand Hetman of the Grand Duchy of Lithuania and the Field Hetman of the Grand Duchy of Lithuania commanded the Lithuanian Army.[6] In theory, it was the Field Hetman (*hetman polny*) who commanded the army's operations in the field, for which reason he was marginally inferior in rank to his Grand Hetman (*hetman wielki*).In reality, both hetmans maintained independent commands and often preferred not to co-operate in operations. Hetman was a title which betrayed both German and Turkic linguistic influences. Its ultimate origin was the German word *Hauptmann* ('captain') which was borrowed into Polish as *Hetman*.

A hetman carried a spherical mace (*buława*) as the symbol of command. This tradition was found throughout eastern Europe and ultimately derived from the Mongols. As with all royal appointments, the tenure of these offices was for life. The King had the right to appoint, but he could not dismiss.

Each of the two armies was in turn divided into two distinct administrative units, each known as an *autorament* (perhaps best translated as 'contingent' or 'enlistment'). The 'foreign autorament' (*cudzoziemski autorament*) consisted of those troops who had been raised along the modern Continental model adopted from Germany, while the 'national autorament' (*narodowy autorament*) consisted of those raised according to the traditional, Eastern, and ultimately mediaeval system. The two types of units, foreign and national, were organised in fundamentally different ways and employed very different tactics. They were also characterised by different standards of training. While the men of the national autorament might be good fighters, they only seldom trained in units. On the other hand, the men of the foreign autorament might well have received training in modern tactics and methods, especially if they had served in Germany.

The National Autorament

The national autorament consisted primarily of cavalry. Its smallest administrative unit was the 'retinue' (*poczet*), which consisted of a gentleman cavalier known as a 'companion' (*towarzysz*) and his retainers (*pocztowy*, pl.

---

[5] Commonly referred to as the Crown Grand Hetman and the Crown Field Hetman, respectively. Stanisław 'Rewera' Potocki served as Crown Grand Hetman from 1654 to 1667. Meanwhile, the position of Crown Field Hetman was held by Stanisław Lanckoroński from 1654 to 1657, followed by Jerzy Sebastian Lubomirski from 1657 to 1664.

[6] Commonly referred to as the Lithuanian Grand Hetman and Lithuanian Field Hetman, respectively. Janusz Radziwiłł served as Lithuanian Grand Hetman from 1654 until his death in 1655. He was followed in this position by Paweł Jan Sapieha, who held the position from 1656 to 1665. Meanwhile, the position of Lithuanian Field Hetman was held by Wincenty Gosiewski, from 1654 to 1662. The mutual dislike between Gosiewski and Radziwiłł was so deep that while both held office together, from 1654 to 1655, their rivalry crippled the Lithuanian Army's operations.

pocztowi), each also sometimes referred to as a 'lad' or 'servant' (*pachołek*), who might number between one and 24 depending on the gentleman's rank and wealth. The number also depended on whether the gentleman was a hussar or cossack-style cavalryman. By this time, the average number of retainers seems to have been somewhere between two and four in the hussars and between one and three in the cossack-style units. Within the light cavalry, there would commonly be only one retainer per gentleman. In addition to retainers, each 'retinue' included a number of non-combatants: camp followers such as wives or other dependents and civilian servants whose duties included the handling of wagons and supplies.

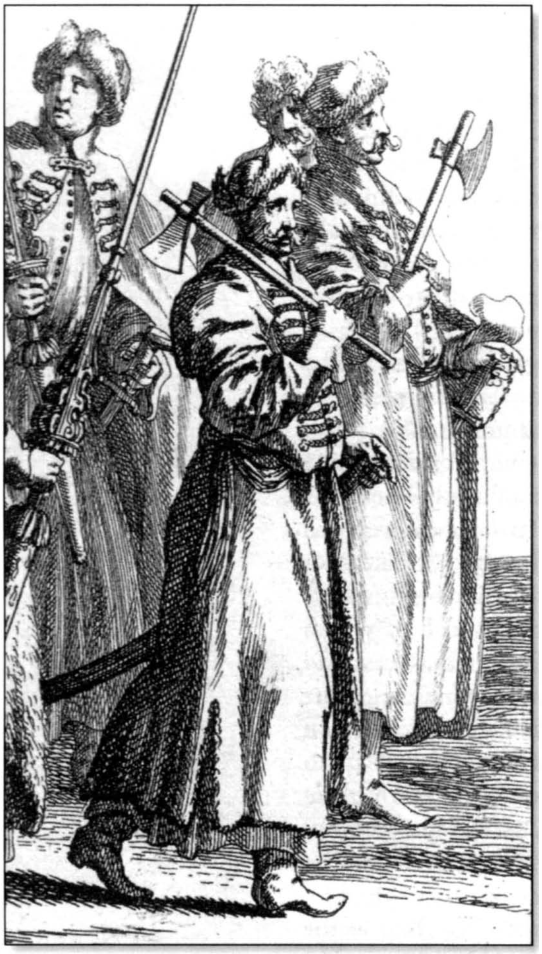
A number of 'retinues' constituted a 'banner' (*chorągiew*), which was the smallest administrative and tactical unit within the national autorament. The same Polish term was used for both horse and foot. For practical purposes, the unit will here be referred to either as a banner or a company, depending on the context. Earlier in the century, this unit was commonly known as a *rota* ('company'), but this term was no longer used. It was, however, still commanded by a 'rotamaster' (*rotmistrz*), who had received a patent or contract to raise a unit of a certain number of horses (or portions, if infantry). He would then gather a suitable number of companions, each of whom would bring his own retinue of retainers and civilians. The rotamaster would appoint one of them his 'lieutenant' (*porucznik*) as second in command. The position of rotamaster was often nominal only, and the lieutenant would then lead the banner or company. Another retainer would be appointed ensign to carry the unit's banner. The rotamaster would bring his own 'retinue', too, but this was significantly larger than the others. In part, because of his rank, but also because he needed to appoint several drummers or pipers for his banner or company.

The size of a newly raised banner or company varied according to the patent issued. Hussar companies were generally 100, 120, 150, or 200 horses strong. Light cavalry companies ranged from 50 to 150 in strength. Companies belonging to senior nobles or generals tended to be significantly larger. As noted, the real strength of a unit was at least some 15 percent lower than its allotted strength in horses or portions. This was because this share of the unit slots was technically referred to as 'blind' positions. The rotamaster received funding for these positions, too, which he either pocketed himself or used to pay additional officers' salaries or necessary expenses.[7]

While most units of the national autorament were cavalry, it included some infantry companies, mostly of a type fundamentally inspired by the old Hungarian haiduk system. Haiduk infantry were musketeers. They wore Eastern dress but lacked armour and helmets. Such infantry had played a significant role in sixteenth-century Commonwealth armies, but this type of unit had since grown obsolete. Nonetheless, such companies were formed,

---

[7] Empty positions of a similar kind also formed a conspicous feature of enlisted units elsewhere in Europe, where they were known as *passe-volants* ('flying-past'). The pay allocated to these positions went to the unit commander, who disposed of this revenue as he pleased. See, for example, *Swedish Discipline*, vol. 3, pp.77, 79, which was used as a manual for foreign enlisted officers in Swedish service.



National infantry armed with axe and sabre. (David Klöcker Ehrenstrahl, *Certamen equestre*, 1672)

in the same manner as the banners of horse, with a company strength usually between 100 and 300 portions. Before the collapse of the traditional army in 1652, such infantry still formed up to 18 percent of infantry and dragoon units. However, the conditions of war mercilessly exposed the obsoleteness of haiduk units, and by 1659, their share had dropped to 5.5 percent.[8] As we will see, the Royal Guard nonetheless retained some for ceremonial reasons and, we may assume, because they formed an important part of the Kingdom's martial legacy. Haiduks also remained common in the various private armies of towns and magnates.

The national autorament did not organise itself into anything like the Swedish squadron or battalion. Instead, a number of banners or companies were temporarily assembled into a formation known as a *pułk*. This was a term of ancient origin which previously best was described as a division but by the time of the Deluge perhaps might better be translated as regiment.[9] This constituted the main tactical unit intended to operate independently. This formation was commanded by the senior rotamaster who accordingly was known as 'colonel' (*pułkownik*). A regiment might consist of no more than two or as many as 40 companies, but from five to 12 seems to have been most common. Unlike Swedish regiments, the *pułk* was not a permanent formation, nor did it have a staff unit.

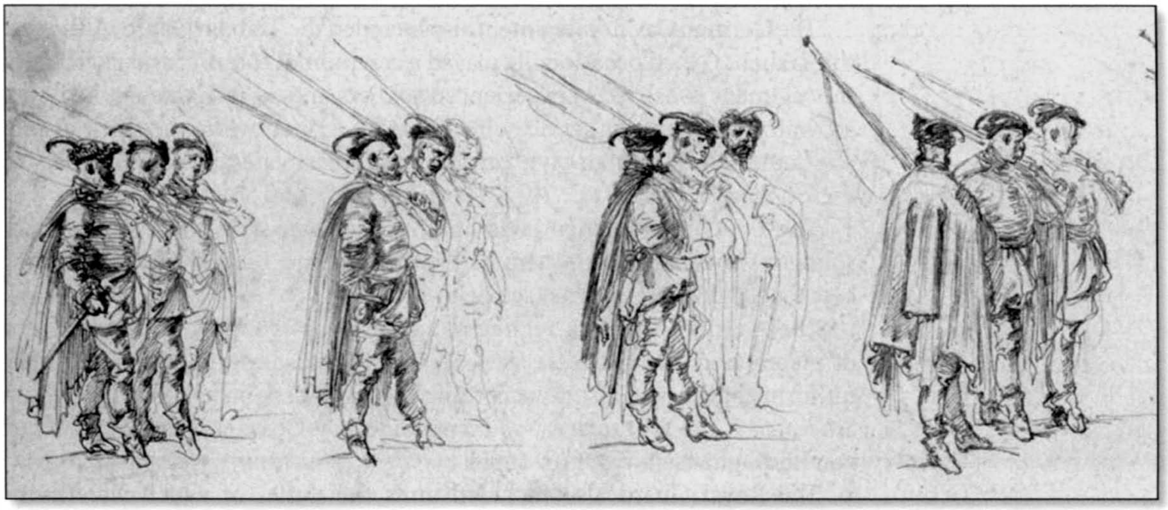
The Foreign Autorament

Things worked differently in the foreign autorament. It was so named because it had originally consisted of soldiers enlisted in Western Europe. However, from 1628 onwards experiments had taken place with local recruits, although still organised, dressed, and armed in the Continental manner and drilled in German. This was less a change than it might appear, since numerous Germans lived within the Commonwealth, in Prussia, Courland, and Livonia, and yet more importantly, in the great merchant cities such as Danzig. Moreover, the change was less one of policy than of necessity, since the ongoing Thirty Years' War meant that far fewer Western European soldiers were available for Commonwealth service.

---

[8] Jan Wimmer, *Wojsko polskie w drugiej połowie XVII wieku* (Warsaw: Wojskowy Instytut Historyczny, Ministerstwo Obrony Narodowej, 1965), p.285.

[9] This military term, of non-Slavic origin, had a very long history and ultimately derived from ancient Gothic *fulk* ('battle formation'), which in the Eastern Roman Empire became *fulcum*. At the same time, the term disseminated into the Slavic languages, in time becoming Polish *pułk* and Russian *polk* ('division', in modern-day terminology 'regiment').



Above: Haiduk musketeers, some dressed in casacks. (Commonwealth envoys to Paris, 1645)

The foreign units included both cavalry and infantry, organised and trained in the Continental manner. Although often referred to as German units, by the time of the Deluge most of the foreign autorament consisted of Commonwealth subjects. The officer corps mostly derived from the Commonwealth's German-speaking territories, in particular Royal Prussia and Livonia, since such men had the relevant modern education and were more likely to be trained in modern warfare. Most of the common soldiers enlisted in these units were Germans, too, which also explains why German was used as the language of command. Many Commonwealth nobles regarded the foreign autorament with suspicion. Even though its men mostly were Commonwealth subjects, they were commoners, not nobles, and thus more likely to become pawns in the hands of what the nobles feared far more than foreign invaders: the growth in royal power sought by those who wanted to modernise the country.

The Royal Guard

As noted, the Royal Guard (*Gwardia królewska*) existed independently of the state army. It was paid from the King's household treasury. In peacetime, the Royal Guard was of roughly regimental size, so as not to intimidate the nobility. In 1646 or 1647, for instance, its strength was limited to 1,200 men to prevent royal power from growing too strong. By 1653, the strength of the Royal Guard had fallen below 500 men. This changed during the Deluge, when the Royal Guard was greatly expanded through the inclusion into it of several additional units, each of which henceforth carried the royal designation 'J.K.M.' (*Jego Królewskiej Miłości*; 'His Royal Grace's') before the unit name. By early 1659, the Royal Guard consisted of four combat regiments in the Continental manner: one regiment of German cavalry, one of dragoons, and three of foot, in total somewhat more than 3,500 men.[10]

---

[10] *Frost, After the Deluge*, pp.17, 255. By 1660, the total had fallen to just over 3,000.

The German Cavalry Regiment also included the Trabant Guard. Although the Trabant Guard occasionally played a ceremonial role on royal guard duty, the regiment consisted of experienced soldiers and, as its name implied, was a cavalry regiment for service on campaign. Armed with wheellock pistols and rapiers, the German-style cavalry wore breastplates and/or buff coats as their only armour.

The Dragoon Regiment was another German-style unit. In 1646, its soldiers wore red jackets trimmed in yellow and burnished (that is, not blackened) *szyszak* helmets (see below).[11]

The German infantry regiments consisted of roughly equal numbers of pikemen and musketeers. At least one was customarily dressed in blue uniforms of European style, according to some accounts trimmed in yellow. Since 1649, the foot guard was commanded by Colonel Fromhold Johann von Lüdinghausen-Wolff (d. 1665).

The Royal Guard also included units the duties of which were more ceremonial than practical. Among them was the Hussar Banner, by this time a company-sized hussar unit of wealthy nobles who served without pay. Likewise, the Tatar Banner included several prominent Tatar nobles. There was also a unit of light cavalry of the traditional style which were used as messengers and for escort duties. In 1646, they wore red uniforms.[12] Finally, the Royal Guard consisted of traditional infantry in the form of a company or two of haiduk infantry.

The German cavalry, dragoons, and infantry provided the fighting force of the Royal Guard. In similarity to Sweden, and possibly in imitation of Swedish practices since the Polish Wasa kings derived from Sweden, the guard units also functioned as a training establishment for officers destined for the foreign autorament. The other units were primarily retained for their ceremonial role and, in the case of hussars and haiduks, for their traditional appearance which lent additional dignity to official events.

Private Armies

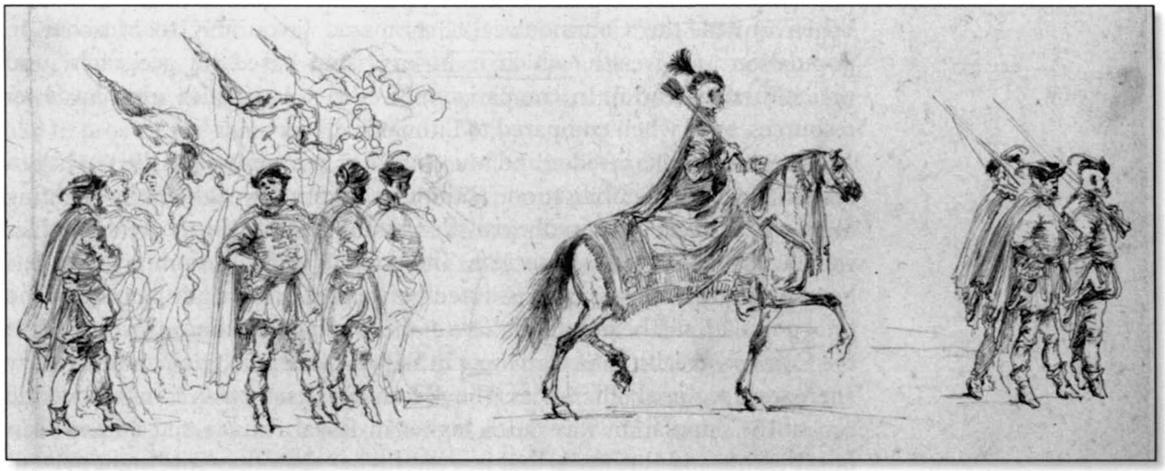
The great Polish and Lithuanian magnates commonly maintained private armies for the protection of their vast estates. In times of peace, it was not unusual for a wealthy magnate to control an army which outnumbered the combined strength of the state army and Royal Guard., Bishops, abbots, and many other senior churchmen likewise controlled huge estates, and like the magnates, they too maintained substantial private military forces, sometimes entire regiments and complete artillery trains. In exceptional cases, a private army might number up to 10,000 men.

The private armies were used for private family feuds and for the protection of the estates. They were generally not employed in support of the state army, since they were privately funded and the best the King could offer the magnates was in most cases no more than additional land and civil titles, both of which they already had aplenty. As a result, a magnate might provide

---

[11] *Brzezinski, Polish Armies*, vol. 2, pp.12, 33.

[12] *Ibid.*, p.12.



Haiduk musketeers, standard bearers, and mounted officer with mace. (Commonwealth envoys to Paris, 1645)

a few hundred men as a token force to support the Commonwealth army in times of need but he would generally not deploy the bulk of his forces, unless he found his own lands at risk.

Large towns and cities raised private armies, too. Each would have a professional town guard which also functioned as a police force. Each also had a burgher militia, which in times of war was raised for defensive purposes. Large towns and cities also had the means to hire enlisted units of soldiers. Richest and most powerful was the city of Danzig, which had the means and will to invest in an arsenal with a vast stock of modern arms and armaments, a comprehensive system of fortifications of the most up-to-date type, the enlistment of entire regiments of foreign professional soldiers, a well-armed burgher militia strong enough to field yet more well-organised regiments, and a private fleet for maritime protection and for securing the city's access to the Baltic Sea. Danzig was, except in name, an independent state.[13] In the 1620s the city of Danzig had successfully withstood the military might of Swedish King Gustavus Adolphus. During the Deluge, we will see that Danzig again resisted Sweden's military power, and just as successfully as in the previous war.

Raising Troops

The manpower potentially available to the Commonwealth is difficult to estimate. The Commonwealth's total population has been estimated at about 11 to 12 million, of which some 7.5 to 8.5 million lived in Poland and only some 3.5 million inhabited Lithuania and Ruthenia.[14] Poland was more populous and wealthier than Lithuania and much more so than Ruthenia.

---

[13] Werner Hahlweg, *Das Kriegswesen der Stadt Danzig*, vol. 1: *Die Grundzüge der Danziger Wehrverfassung 1454–1793* (Berlin: Junker und Dünnhaupt, 1937), p.16.

[14] Iwo Cyprian Pogonowski, *Poland: A Historical Atlas* (New York: Hippocrene Books, 1987), p.115; Andrej Kotljarchuk, *In the Shadows of Poland and Russia: The Grand Duchy of Lithuania and Sweden in the European Crisis of the mid-17th Century* (Södertörn University College, dissertation, 2006), p.28.

When united, the Commonwealth compared favourably to Muscovy in population and wealth, which is unsurprising based on geography and agricultural potential. In comparison, Sweden was smaller and had fewer resources, even when compared to Lithuania alone.

However, unlike Sweden and Muscovy the Commonwealth did not have a system for general mobilisation. Within the Commonwealth, the key fighting force was the one supposedly provided by the nobility. In theory, all nobles were available for military service. The nobility in the Commonwealth has been estimated as having constituted between six and eight percent of the total population. The nobility's share of the total population was far higher in the Commonwealth than elsewhere in Europe, except in Spain and Hungary. There were regional differences. The percentage of nobles as compared to the rest of the population was much higher in Royal Prussia and Poland than in Lithuania and Ruthenia, that is, even higher than the six to eight percent proposed as an average share.[15] In theory, the nobility should have been able to raise a fighting force of several hundred thousand well-armed and trained men. However, the Commonwealth never managed to raise more than a small share of all who supposedly should have served. There is no information on the share of the nobility, or of the general population, which the Commonwealth actually managed to raise for purposes of mobilisation. However, it seems clear that the Commonwealth lacked the mechanisms to mobilise as high share of its population as the one achieved in Sweden, which, as we have seen, without particular hardship mobilised men in excess of six percent of the population. By the end of the wars of the Deluge, Muscovy, too, had established a general system of conscription which enabled the raising of more men than the Commonwealth ever achieved.

As we have seen, the Commonwealth used some enlisted units, raised in the customary Continental manner. There was little fundamental difference between enlisted soldiers in Swedish and Commonwealth service with regard to skills and training, and prisoners of war could usually be inserted into existing units without difficulties. However, the Commonwealth based its system of raising troops not on enlisted soldiers but on the levy. Foremost was the levy of the men of the nobility, but in times of need peasants and townsmen were levied, too.

The Levy of the Nobility

The Levy of the Nobility (*Pospolite ruszenie*) was a mobilisation of nobles according to a custom which (like its Swedish counterpart, the Retinue of Nobles) derived from the Middle Ages. The Levy could be raised as a 'small' one, if the problem was only regional in nature, or as a 'grand' one, with the King in command. The Grand Levy of the Nobility would in theory include all nobles within the realm, although at the time of the Deluge, in reality the number raised would be closer to 33,000.[16]

---

[15] Frost, *After the Deluge*, p.10. There is no academic consensus on the share of the nobility of the total population, and some argue for higher figures. Kotljarchuk, *In the Shadows*, p.31, proposes a figure of 10 to 11 percent for Lithuania and Ruthenia.

[16] Wimmer, *Wojsko polskie*, pp.93, 95.

When raised, the Levy was organised into units based on province (*województwo*), land (*ziemia*), and district (*powiat*). Each noble was responsible for bringing his own arms, armament, and provisions. He also had to provide the same for his men.

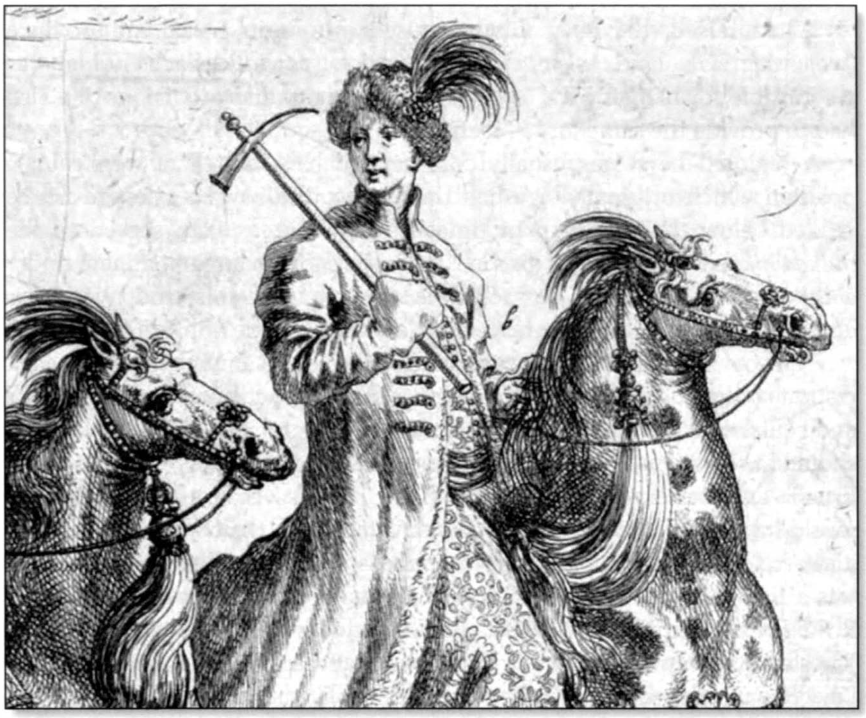
A regional Levy was usually commanded by a castellan (*kasztelan*; a position which originally signified the keeper of a royal castle and hence ranked below the voivode). In times of war, the castellan served as the *pułkownik* of the men of his district. The nobles formed up in banners under a rotamaster. Most were cossack-style cavalry, since this troop type was cheaper to raise and thus more accessible to the average noble.

In theory, the nobles of the Levy had to participate in annual musters in each district so that it could be ascertained that each had acceptable arms, armour, and equipment. As we have seen, the total number of adult male nobles who should have shown up for these musters was considerable, especially in Royal Prussia and western Poland, and probably more so than available logistics would have allowed. It is accordingly hard to escape the conclusion that the idea of a Commonwealth army based on the Grand Levy of the Nobility always was a fiction, primarily entertained by the nobles themselves. Moreover, in Royal Prussia and western Poland, the Levy seldom had to face actual combat. The situation was very different in the south and east, where the Lithuanian Levy often had to mobilise to confront raids by Crimean Tatars. This gave the individual members of the Levy in these regions significantly more combat experience than their counterparts in western Poland.

The Levy, particularly within the Crown Army, had a well-established reputation for poor discipline. Every Commonwealth noble, even a minor one, claimed the right to question and veto orders, including those from the King. For this reason, it was always difficult and time-consuming to gather the Levy in one location, and when eventually mobilised, it was equally or yet more difficult to keep it together. It was also trying to persuade the Levy actually to attack the enemy. This was not necessarily because of lack of bravery, but because some of its constituent nobles might feel that they had a better grasp of tactics and strategy than their commanding officer. Since each noble had to provide his own provisions, many returned home as soon as their initial supplies ran out. It was a common belief that as long as the Levy had participated in at least one action, whether a victory or defeat, it had fulfilled its obligations with honour, and so could dissolve, regardless of the strategic circumstances. Besides, every noble claimed the right to depart for personal business, when needed, so when confronted by an able enemy, panic easily broke out, with each man departing in a hurry. A Commonwealth army based on the Levy might disintegrate overnight. In an oft-cited assessment, the Polish noble and soldier Jan Chryzostom Pasek (*c.*1636–1701) in his old age commented on the fickleness of the Levy: 'As long as I live, I will never take such a command, and I would rather herd pigs than command the Levy of the Nobility in an attack.'[17]

---

[17] Jan Chryzostom Pasek, *Pamiętniki: Całość* (Cracow: Polska Akademja Umiejętności, 1929), p.208.



Polish noble cavalryman with war hammer. (David Klöcker Ehrenstrahl, *Certamen equestre*, 1672)

Peasant and Townsman Levies

As noted, peasant and townsman levies could be raised, too. Levies raised from the royal estates were over time variously known as *wybraniecka* ('chosen' which in this case meant 'conscripted'), *łanowa* ('acreage-based'), and *dymowa* ('chimney-smoke-based') depending on the basis for the levy, which like taxation was based on the size of lands and houses. *Łanowa* units were drawn from noble and ecclesiastical estates as well. Since service in the levy fundamentally was a kind of taxation, some regions paid their dues in cash instead of levies. Those raised from the towns served as infantry, while those raised in the country often served as mounted soldiers. Poorer districts raised more foot than wealthier ones, which provided significantly more cavalry.

Mobilisation

In June 1654, when Muscovite armies already had entered Lithuania, parliament finally authorised money for mobilisation. For the first time, the new Komput system was put to the test in a crisis. Parliament decided to increase the Crown Army to 35,000 soldier units and the Lithuanian Army to 18,000 soldier units. The parliament also called up the Levy of Lithuania. However, parliamentary decisions were one thing and reality another. Lithuanian Grand Hetman Janusz Radziwiłł only managed to raise 12,000 men at most, and when the necessary garrisons had been detached from this force, only 8,000 men at most remained for the field army. Meanwhile, the Crown Army was successfully increased – not to 35,000 soldier units but at least to 26,913 soldier units (some 24,000 men).[18] In short, the system worked, but not as well as parliament had hoped.

When in 1655 the Commonwealth faced a war on two fronts, against Muscovy and Sweden, additional forces were raised, possibly 75,000 men including levies (Table 8 – see end of chapter).This was a real achievement, even though more than half were levies. However, in reality the units were dispersed, since mobilisation only had begun in late July. Moreover, the commanders failed to co-ordinate their activities, so the full potential of the mobilisation effort was not achieved.

In spring 1659, after a decade of warfare which had focused the parliament's attention on the need for soldiers, the Komput army of Poland counted 40,305 soldier units, while the Komput for Lithuania stood at some 20,000 soldier units, with a combined real strength in excess of 50,000. This did not include the noble cavalry of the Levy of the Nobility, which in theory accounted for tens of thousands. This was the largest *standing* military force ever put in the field by the Commonwealth during the seventeenth century.[19] In 1667, following the peace agreement with Muscovy, the peacetime establishment strength of the Komput army was reduced to 15,990 for Poland and 7,271 for Lithuania, with a real strength of some 20,000. Of this force, over half (11,960) were infantry and dragoons, although 3,100 of these were only to be retained until the situation in the Ukraine had stabilised.[20]

The relative increase in the share of modern dragoons and infantry in the Commonwealth army is striking and was the result of lessons learned during the Deluge. Yet more importantly, from 1655 to 1659 the relative weight of the foreign autorament tripled in size in the Crown Army (from 6,628 to 20,320 portions), while the national autorament grew by merely 30 percent (from 14,870 to 19,450 portions and horses).[21] In short, the Commonwealth commanders learned that a modern war demanded modern troop types and tactics, of the type by then common elsewhere in Europe. The age of armoured knightly warfare was finally over, even in the Commonwealth.

Hussars

The foremost Commonwealth troop type was the hussar. Famous as the winged hussars (Polish: *husaria*), they were levied from the nobility in both Poland and Lithuania and served as armoured lancers. Each brought as splendid armour and dress as he could afford, so while a hussar unit presented a spectacular appearance, there was little or no uniformity. Many Commonwealth hussars wore 'wings'. A wing was made of a line of feathers

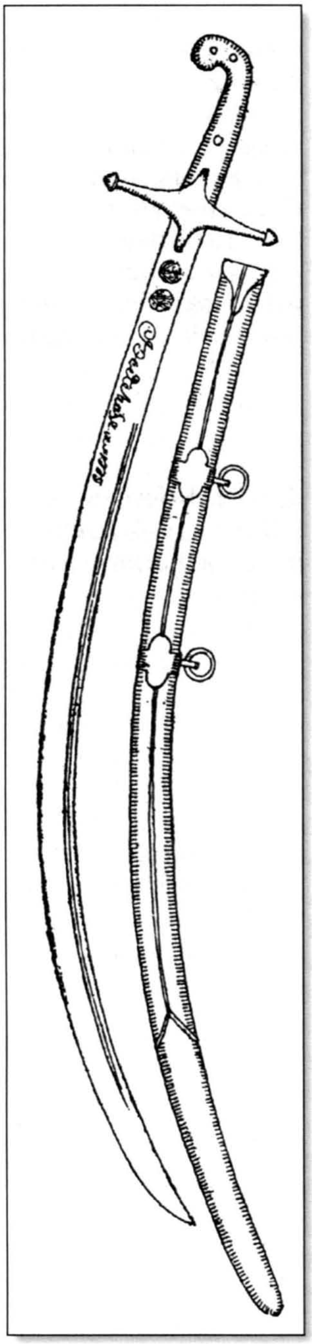
---

[18] Jan Wimmer, 'Armé och finansväsen i Polen under kriget med Sverige 1655–1660', Arne Stade and Jan Wimmer (eds). *Polens krig med Sverige 1655-1660: Krigshistoriska studier* (Stockholm: Kungl. Militärhögskolan, *Carl X Gustaf-studier* 5, 1973), pp.41–101, on p.53. However, of these only some 20,000 were actually deployed in the field army. A total of 3,669 men of the Crown Army were sent in support of the Lithuanian Army. *Ibid.*, p.90 n.56.

[19] Wimmer, *Wojsko polskie*, 122; Wimmer, 'Armé och finansväsen', p.84.

[20] Frost, *Northern Wars*, p.248; in part based on Wimmer, *Wojsko polskie*, pp.152–3.

[21] Mirosław Nagielski, *Warszawa 1656* (Warsaw: Bellona, 2009), p.274.



Sabre dated 1665, attributed to Hetman Ivan Mazepa. (Mikhail Grushevskiy)

inserted into a wooden frame which was affixed to the hussar's armour backplate or saddle. The saddle arrangement seems to be the earlier one, but both types existed at the time of the Deluge. The feathers might be eagle, vulture, or falcon, although poorer nobles at times used painted goose feathers instead. The hussar troop type first seems to have emerged in Serbia and was common also in Hungary. In sixteenth-century Poland, this type of soldier had replaced the Western European-style knight in full plate armour who had dominated warfare there since the late Middle Ages.

Most hussars wore a lobster-tailed pot helmet of the originally Inner Asian *szyszak* type, which also was used by Muscovites and previously in the century had become widespread in Germany under the name *zischägge*. They also wore half-armour, that is, plate armour covering the upper body and arms (vambraces), or a combination of chainmail and plate. A set of hussar armour commonly weighed from 18 to 20 kg. Yet, the breastplate was only around 3–3.5 mm thick, which made it vulnerable to Swedish musket fire. The armour was often ornate, especially among those who had the means, which would have been the majority of those nobles who served as hussars.

The hussar carried a light lance, about 5 m long. The lance was beautifully painted, and made from two separate pieces which were hollowed out for lightness. Above the polygonal handgrip was a flattened ball which provided some balance and to a certain extent served as a hand guard. Since the hollow lance broke easily when it made contact, it was necessary to bring large numbers of spare lances in the supply train. As sidearms, the hussar carried not one but at least two: a curved sabre, suspended from a waist belt in the customary manner, and a long, straight sword, either the type with a sabre hilt known as a backsword or palash, or an armour-piercing sword, hung on the horse under the left side of the saddle.

The sabre was a variation of the Turco-Mongolian wide-bladed and slightly curved cavalry sword. It reached the Commonwealth from Hungary, which also gave the weapon its name (Hungarian: *szablya*; Polish: *szabla*). Ultimately, however, the weapon derived from the Ottoman Empire (where the name was known, in Turkish, as *kılıç*; 'sword'). The Hungarians adopted the sabre widely after the Ottoman victory over them in the battle of Mohács in 1526. Incidentally, and no doubt of greater importance, this was also the battle which resulted in the partition of Hungary for several centuries between the Ottoman Empire, the Habsburg Kingdom of Hungary, and the Principality of Transylvania. The sabre had a moderately curved, single cutting edge, except for the end of the blade around the point which was flared and double edged (and known, in Turkish, as the *yalman*). In the Commonwealth, a variant of the sabre known as a *karabela* (a term possibly derived from Turkish *karabela*, 'black curse') soon evolved. This was a regular sabre but with the grip stylised as the head of a bird. Both this variant and the more common one, styled on the Hungarian sabre, became very common.

The backsword or palash (Polish: *pałasz*; German: *Pallasch*; Hungarian: *pallos*, 'sword'), a long, straight broadsword with a sabre grip, was introduced to the Commonwealth soon after the introduction of the Ottoman sabre. The palash is traditionally believed to have been an

Eastern European invention, aimed to be more efficient against plate armour than the slashing sabre and also better suited for thrusting. However, the weapon type was used already by the Ottomans who in turn may have been inspired by blades in existence during the pre-Ottoman Abbasid Empire. In the Commonwealth, the palash was commonly single edged, except that it had a Turkish-style *yalman*. This suggests an Ottoman origin for this weapon as well. The weapon's blade length reached up to about 94 cm.[22] The palash was longer than the sabre and primarily intended to be used from horseback.

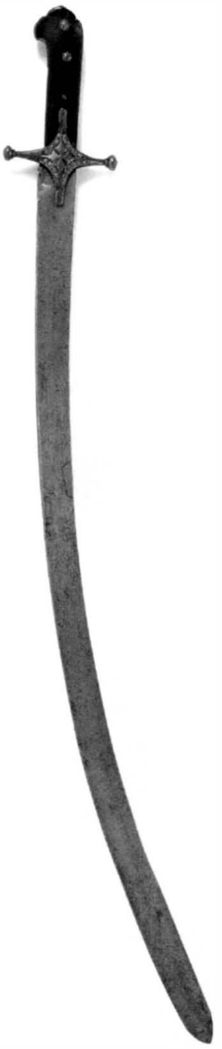
Even longer was the armour-piercing sword (Polish: *koncerz*; German: *Panzerstecher*). Suitable for piercing chainmail armour and solely intended to be used from horseback, it was very long, with the blade alone from 1.25 up to 1.39 m long.[23] Total length might exceed 1.5 m. The weapon was of pre-Ottoman origin and probably developed in central Europe during the late Middle Ages.

As if this was not enough, officers and many nobles added a war hammer to their set of sidearms. This weapon was also the sign of somebody in command, but of lower rank than a hetman, who as noted carried a spherical mace (Polish: *buława*) as the symbol of supreme command.

Since each Commonwealth noble supplied his own arms and equipment, they wore fundamentally civilian dress. Noble dress was expensive, with plenty of silks, satins, and velvets. Those who had the means added gold and silver. Customary Commonwealth male dress consisted of a long undergarment (Polish: *żupan*), of Inner Asian origin and known by a Turkic or Tatar name. It was closed from right to left and had sleeves terminated with a characteristic elongated cuff (known as a 'dog's ear') that could be used to cover part of the hand. Among nobles, the dog ears were usually worn upturned to show the differently coloured lining. Over this garment was worn a caftan (Polish: *kontusz*). To this was added high but soft leather boots, and typically a high, fur-lined cap (Polish: *kuczma*; Ukrainian: *kuchma*) of Tatar origin, frequently decorated with a feather or two. Many shaved their foreheads and necks but for a long lock on the top, combed onto the forehead, and wore long moustaches. This custom derived from the Tatars and was common also in the Ottoman Empire. Others did not go to this extreme, but still shaved more of their heads and necks than was common in western and central Europe. Poles who left the Commonwealth for travels within Germany or further afield customarily adopted western European hairstyles.

As a final note, many wealthy hussars wore the fur of a wild animal, preferably a leopard or wolf, over their armour.

Since Commonwealth hussars were the lineal descendants of the Western European style, Polish knight in full plate armour, unlike most other eastern Commonwealth cavalry they used spurs in the European manner and their horse-riding manner was more European than Inner Asian in style. Hussars were expected to build up the charge from a walk (for 100 paces, or 75 m), to

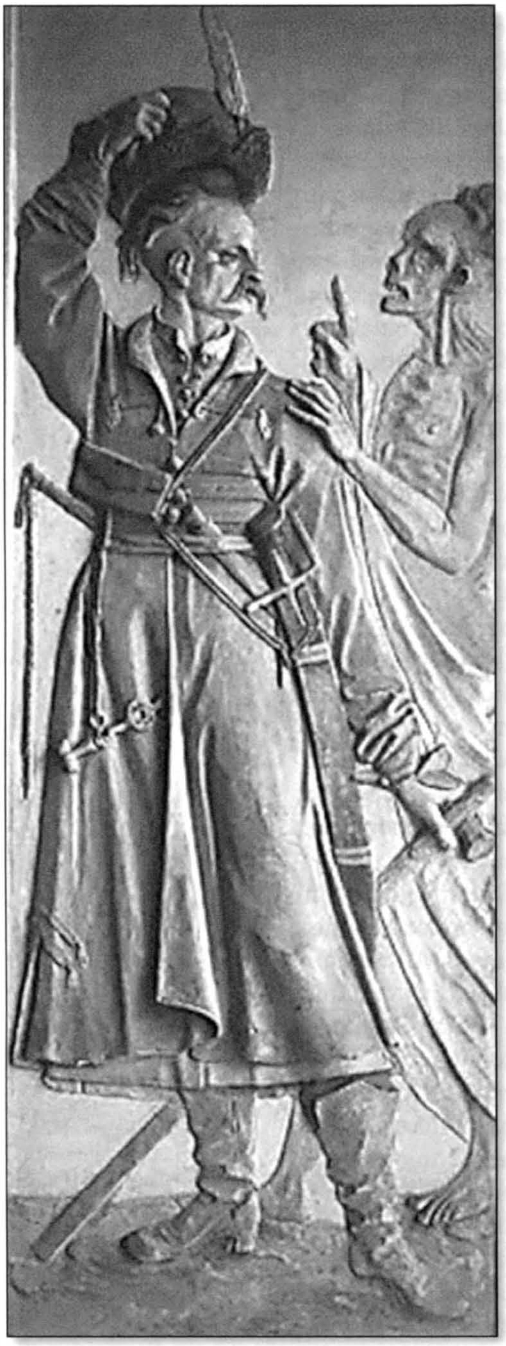


Karabela, dated and attributed to seventeenth-century Poland. Total length 88.0 cm, blade length 76.6 cm. (Royal Armoury, Stockholm; photo: Samuel Uhrdin)

---

[22] Wojciech Zablocki, *Szableś wiata* (Warsaw: Bellona, 2011), p.83.

[23] *Ibid.*, 84.



Noble in customary Polish dress, from a stucco relief with the popular motif 'Death and the noble' in Tarlów dated to the 1640s. This noble is typical of those who served in the Commonwealth cavalry, whether as hussar, cossack-style cavalryman, or officer in other units. He wears a żupan undergarment, caftan, soft leather boots, and high, fur-lined cap, all of Eastern origin. Armed with a sabre and a long-shafted war hammer which also served as a walking-stick, in addition he carries a short whip (instead of spurs), a wheellock spanner for his pistol or carbine, and a flat sabretache container on his side. The sabretache, often of red leather, was intended for carrying ammunition, but contemporary observers noted that they were equally often employed for carrying letters, documents, a comb, and money (Beauplan, *Description*, p.186). The French officer Beauplan, who served in the Commonwealth before the Deluge, noted that the Polish nobles, although arrogant and rude to inferiors, were pleasant enough to foreigners. However, they were unwilling to deal with and often expressed their hatred of Turks, Tatars, Muscovites, Swedes, and Germans (*Ibid.*, p.181).

a trot (for the next 200 paces, or 150 m), followed by a gallop (for another 120 paces, or 90 m), until the charge itself began at a distance of 80 paces (60 m) from the enemy line.[24]

At the time of the Deluge, the hussars generally accounted for between five and 15 percent of the cavalry. Many small battles were fought wholly without hussars, since they tended to attach themselves to commanders of a certain social stature, which meant that they primarily served in the larger armies. Being the socially most prestigious of Commonwealth military men, senior commanders almost invariably had served as hussars, and if not, they had at least served in another type of national cavalry, commonly a cossack-style unit. However, and again for reasons of social prestige, the average hussar served only for a short period of time, so as to fulfil family expectations, and most were in no way professional soldiers. This pattern did not change even during the long period of extensive warfare from 1648 to 1667. In the banner of Władysław Myszkowski, for instance, more than a third (37 percent) of noble hussars served for no more than one year. In effect, this merely provided basic training and was hardly sufficient to produce an experienced fighting man. Although half (50.3 percent) served between one and five years, those with real experience were few: only about a tenth (12.7 percent) of the total served for more than five years. And this was not a unique situation. Even in the prestigious banner of Crown Grand Hetman Stanisław Potocki, a fifth (19.1 percent) of noble hussars served for no more than one year. Again, this was hardly sufficient to produce an experienced soldier. Although slightly more than half (55.3 percent) in this unit at least served between one and five years, those with real experience were again few: a fifth (20.8 percent) served for up to 10 years, while fewer than one man in 20 (4.8 percent) served for more than 10 years.[25]

---

[24] *Regulamen exercerunku dla regimentow Konnych Gwardyi J.K. MciKoronney y WX. Lit.* (Warsaw: Drukarnia nadworny J.K. Mciy PP. Kom. Eduk. Narod., 1786), p.577. The Crown Horse Guard regulations from 1786, which seemingly all modern-day Polish historians rely on. See, for example, Stanisław Herbst, 'Tredagarsslaget vid Warszawa 1656', Arne Stade and Jan Wimmer (eds). *Polens krig med Sverige 1655–1660: Krigshistoriska studier* (Stockholm: Kungl. Militärhögskolan, *Carl X Gustaf-studier* 5, 1973), pp.255–93, on p.279; Nagielski, *Warszawa*, p.190.

Cossack-style Cavalry and *Pancerni*

As noted, in the Commonwealth cavalry the term 'cossack' had little if anything to do with the cossacks of the Lower Dnieper. Soldiers referred to as cossacks were raised throughout the Commonwealth. Indeed, we have seen that cossack was the customary term for any cavalry not labelled hussars, for which reason we will refer to them as cossack-style cavalry.

Cossack-style cavalrymen were primarily armed with composite bows, carried in a bow case on the left side and a quiver on the right. By the time of the Deluge, many, but by no means all, also carried a wheellock carbine and/or several wheellock pistols. Others might bring a musketoon, a musket with a short barrel for use on horseback. Even so, they would still carry a composite bow in the customary manner. Many still wore a round shield (Polish: *kalkan*) for protection, of the type still prevalent among the Crimean Tatars, in the Caucasus and, incidentally, within the Ottoman Empire. As a sidearm, they would carry a sabre.

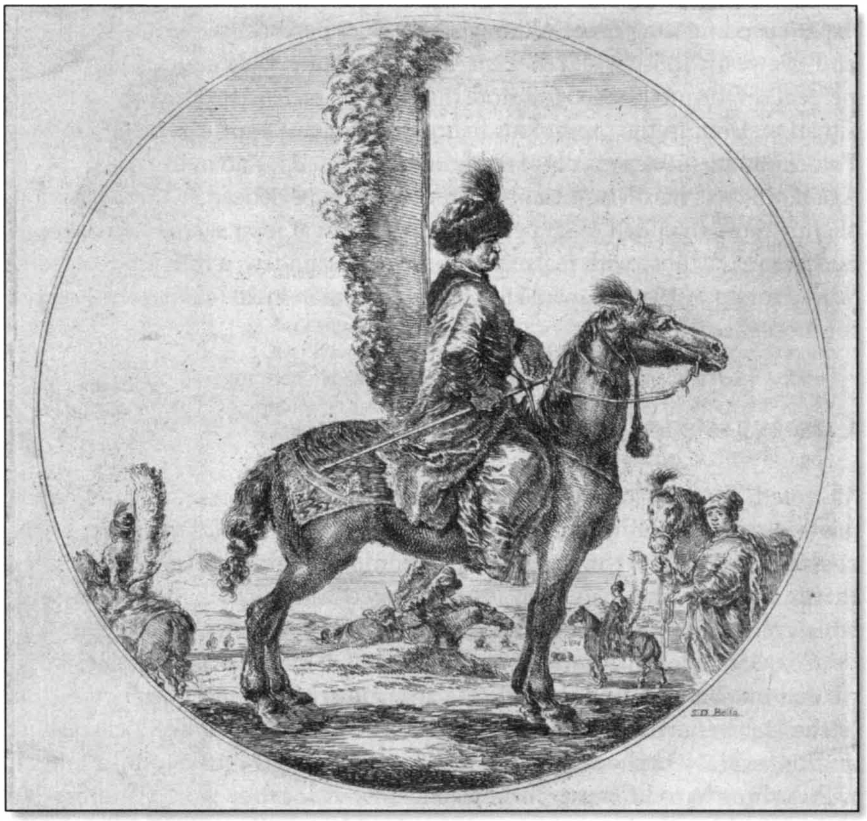
Like Muscovites and other easterners, cossack-style cavalrymen rode horses in the Mongol style, with short stirrups that allowed them to stand clear of the saddle. They used Mongol-style saddles and stirrups, and relied on a Mongol-style short whip instead of spurs.

Over time, many cossack-style cavalrymen acquired chainmail or splint-mail armour with vambraces and so became 'armoured' (*pancerni*). They would also acquire helmets. Some well-to-do cossack-style companies were indeed better armoured and equipped than hussars from poor families. It was common for armoured cossack-style units to be converted into hussars, and sometimes vice versa.

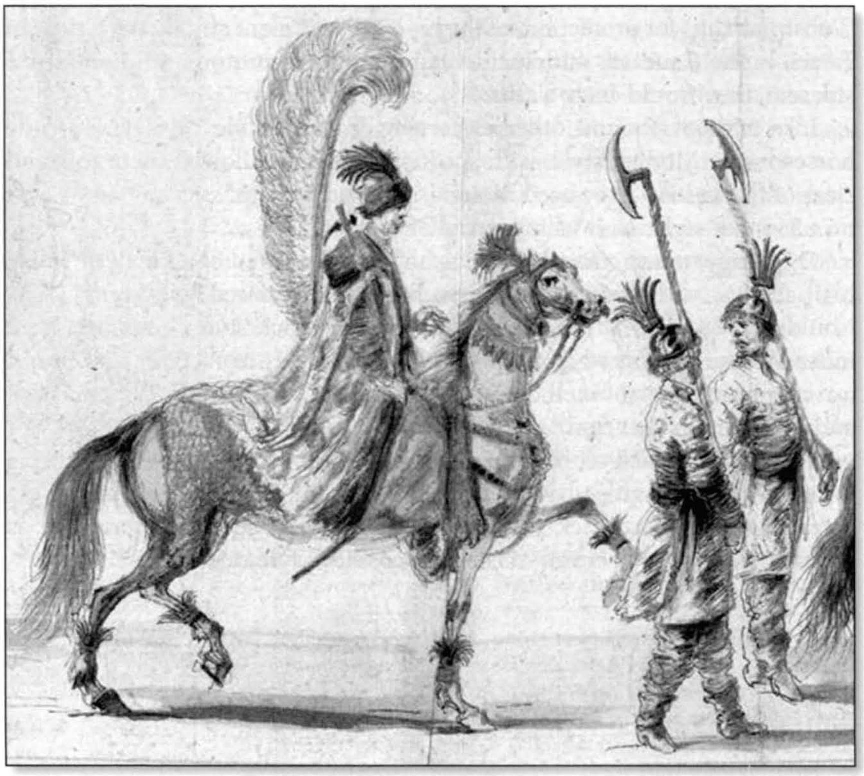
When the cossack rebellion in the Ukraine broke out in 1648, it became necessary to distinguish between rebels and loyal cossack-style cavalry. As a result, the loyal cossack-style cavalry henceforth became referred to as *pancerni* ('armoured') cavalry instead of cossack-style cavalry.

---

[25] Frost, *Northern Wars*, p.250.



Noble on horseback, unarmoured but with a hussar wing fastened to his saddle in the old manner. The use of hussar wings for festive purposes was common. (Stefano della Bella)



Noble on horseback, unarmoured but with a hussar wing fastened to his saddle in the old manner to give a festive air to the occasion. His two haiduks carry pole-axes of the *berdysz* type and wear particularly distinctive headgear, again to fit the occasion. (Commonwealth envoys to Paris, 1645)

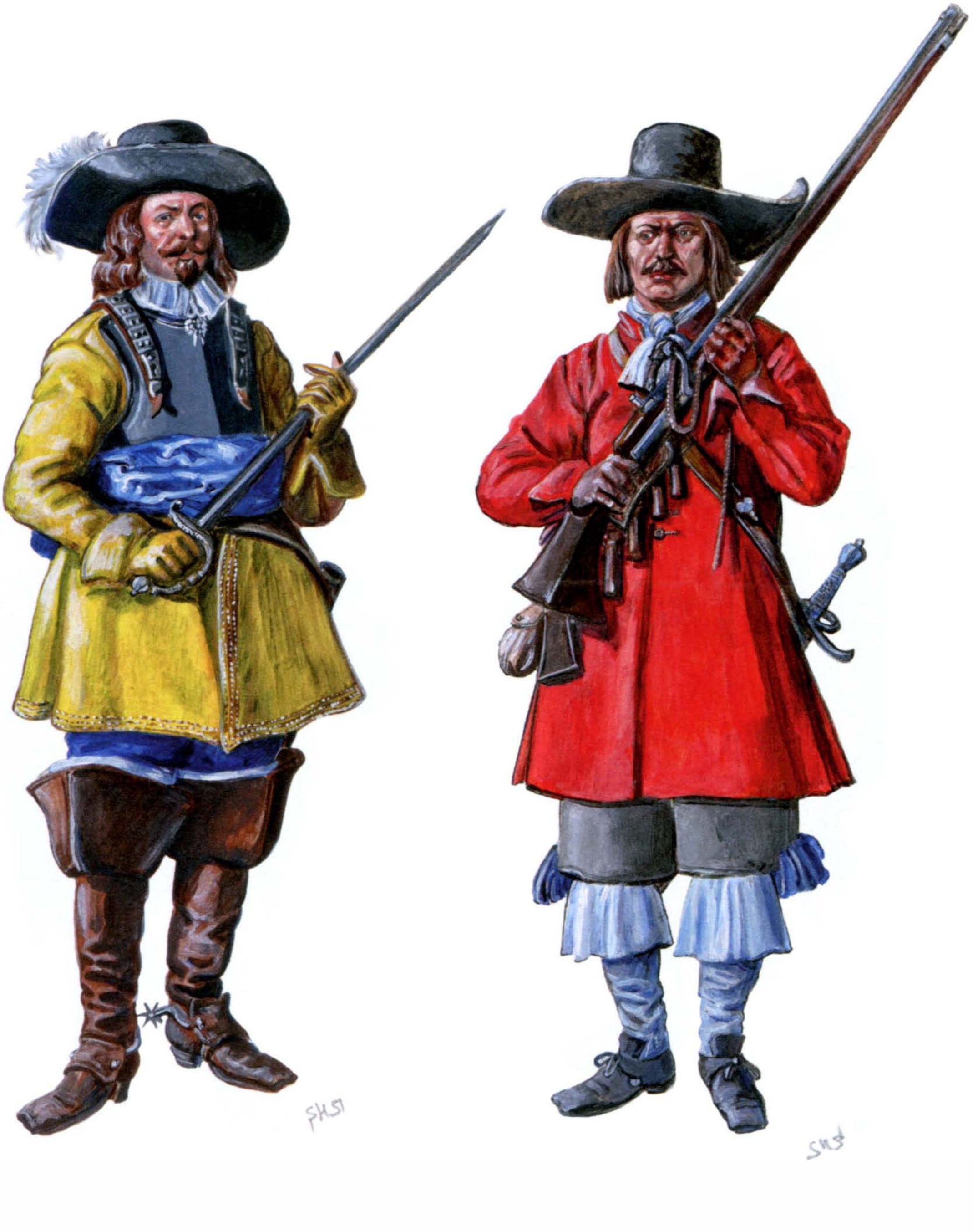


Plate A

A1. Swedish Cavalry Trooper, Viborg Cavalry Regiment; A2. Swedish Dragoon, Adam von Weiher's Dragoon Squadron

(Illustration by Sergey Shamenkov, © Helion & Company)

See Colour Plate Commentaries for further information.

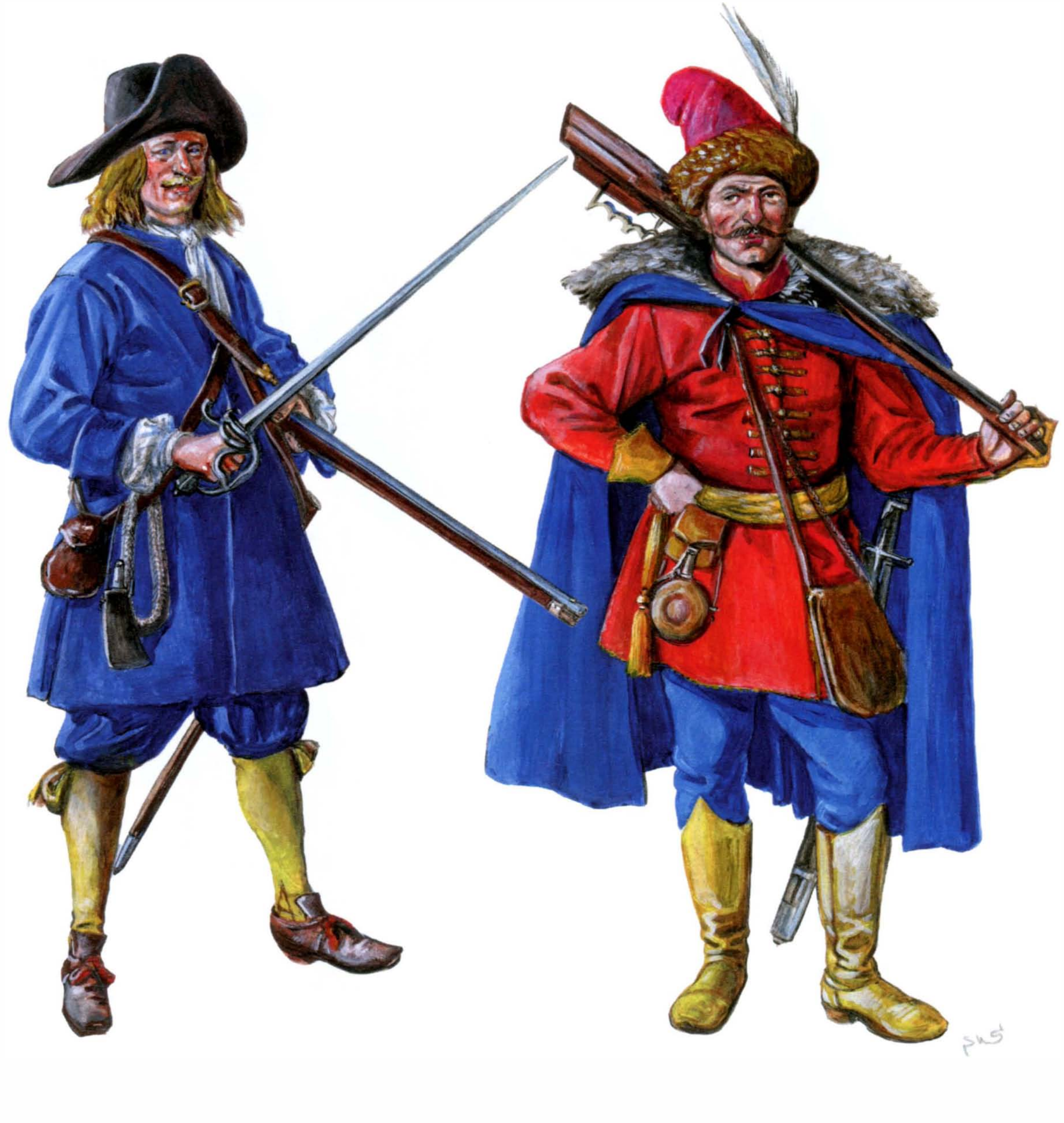


Plate B

B1. Swedish Musketeer, Hälsinge Regiment; B2. Transylvanian Haiduk Cavalry Officer

(Illustration by Sergey Shamenkov, © Helion & Company)

See Colour Plate Commentaries for further information.

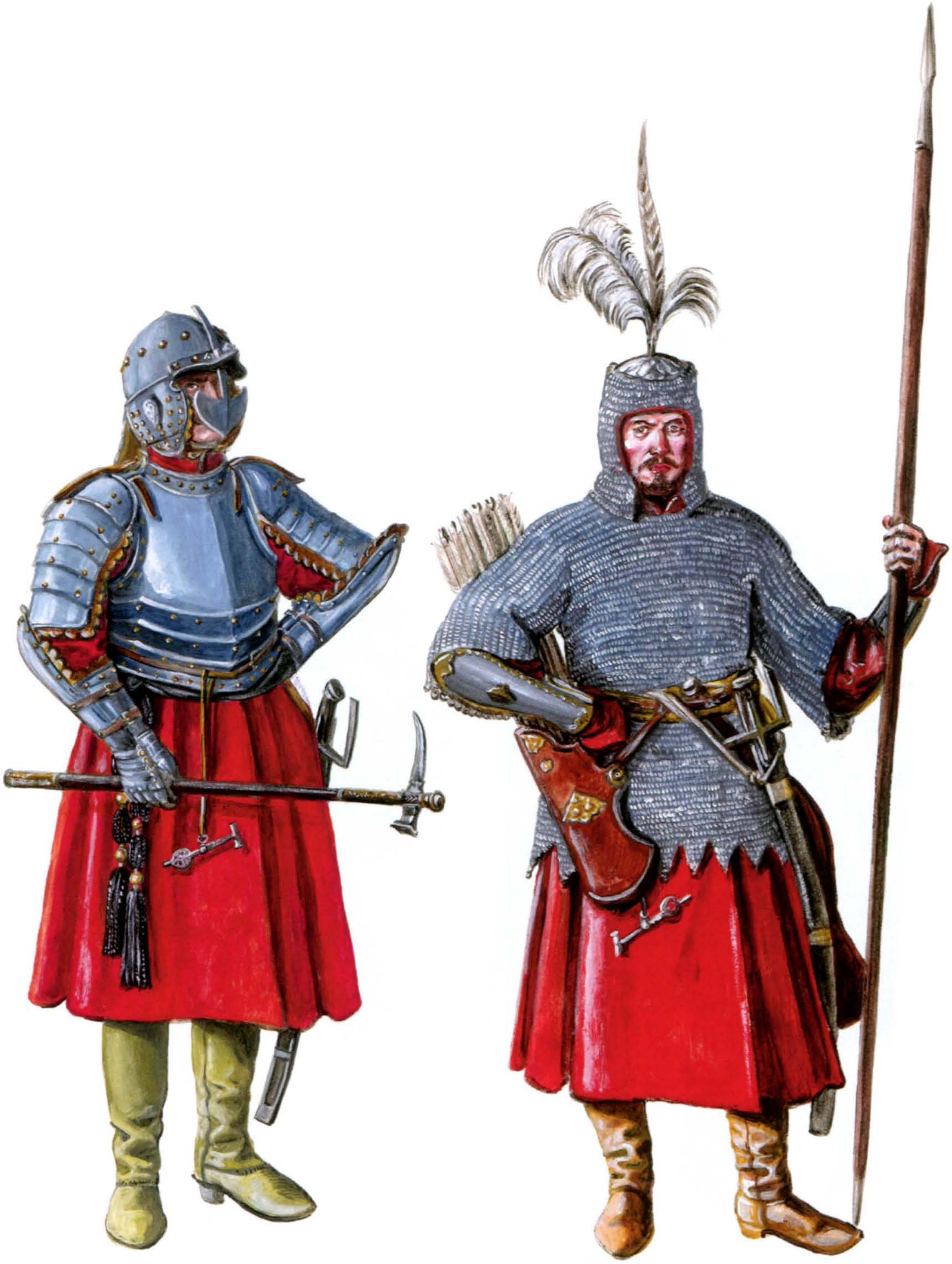


Plate C

C1. Polish Hussar, Jan Zamoyski's Banner; C2. Lithuanian Pancerni Cavalryman, Grand Hetman Paweł Jan Sapieha's Banner

(Illustration by Sergey Shamenkov, © Helion & Company)

See Colour Plate Commentaries for further information.

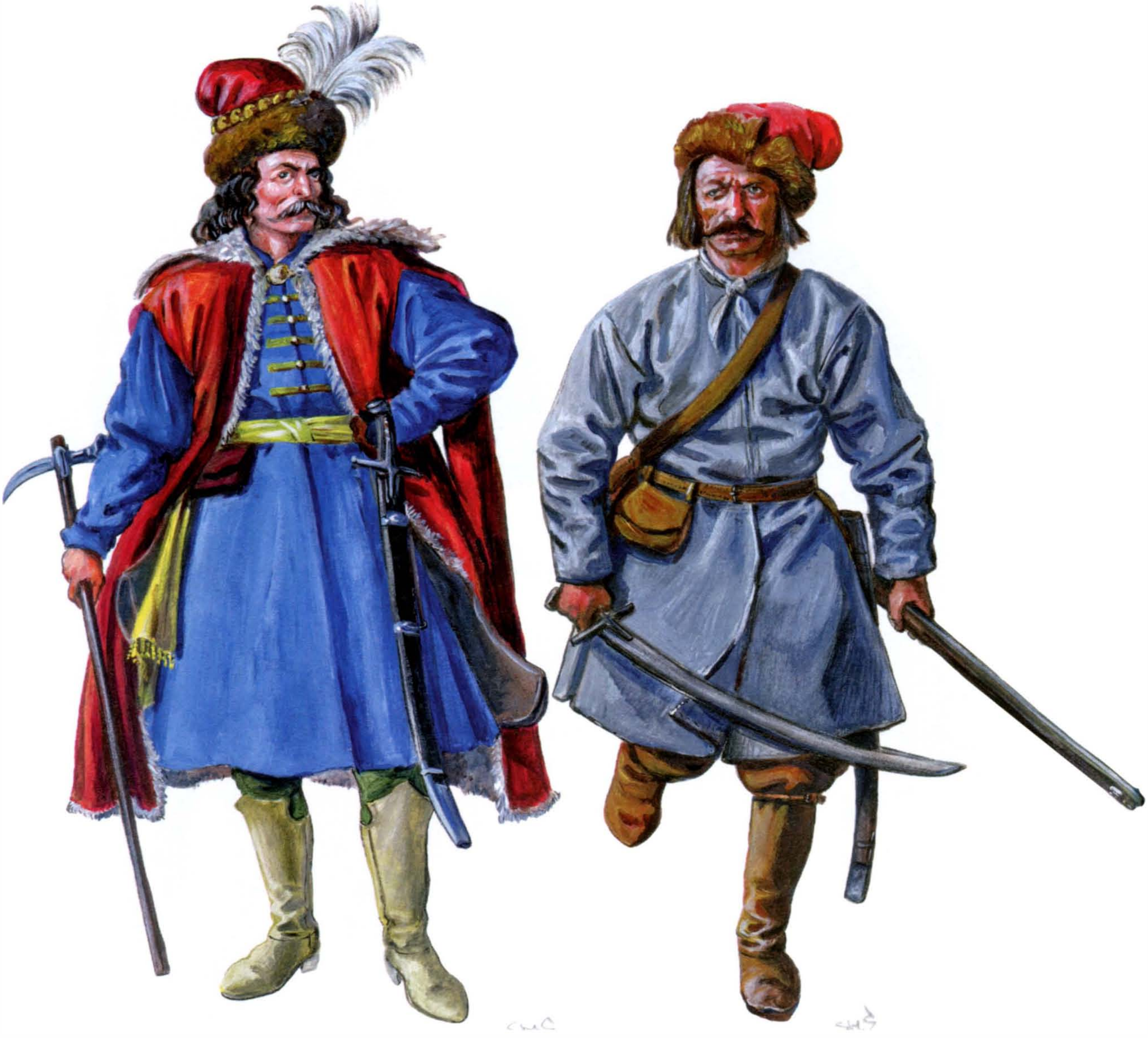


Plate D

D1. Wallachian Cavalry Officer, Jacek Szemberk's Wallachian Banner; D2. Polish Dragoon, Aleksander Koniecpolski's Dragoon Banner

(Illustration by Sergey Shamenkov, © Helion & Company)

See Colour Plate Commentaries for further information.

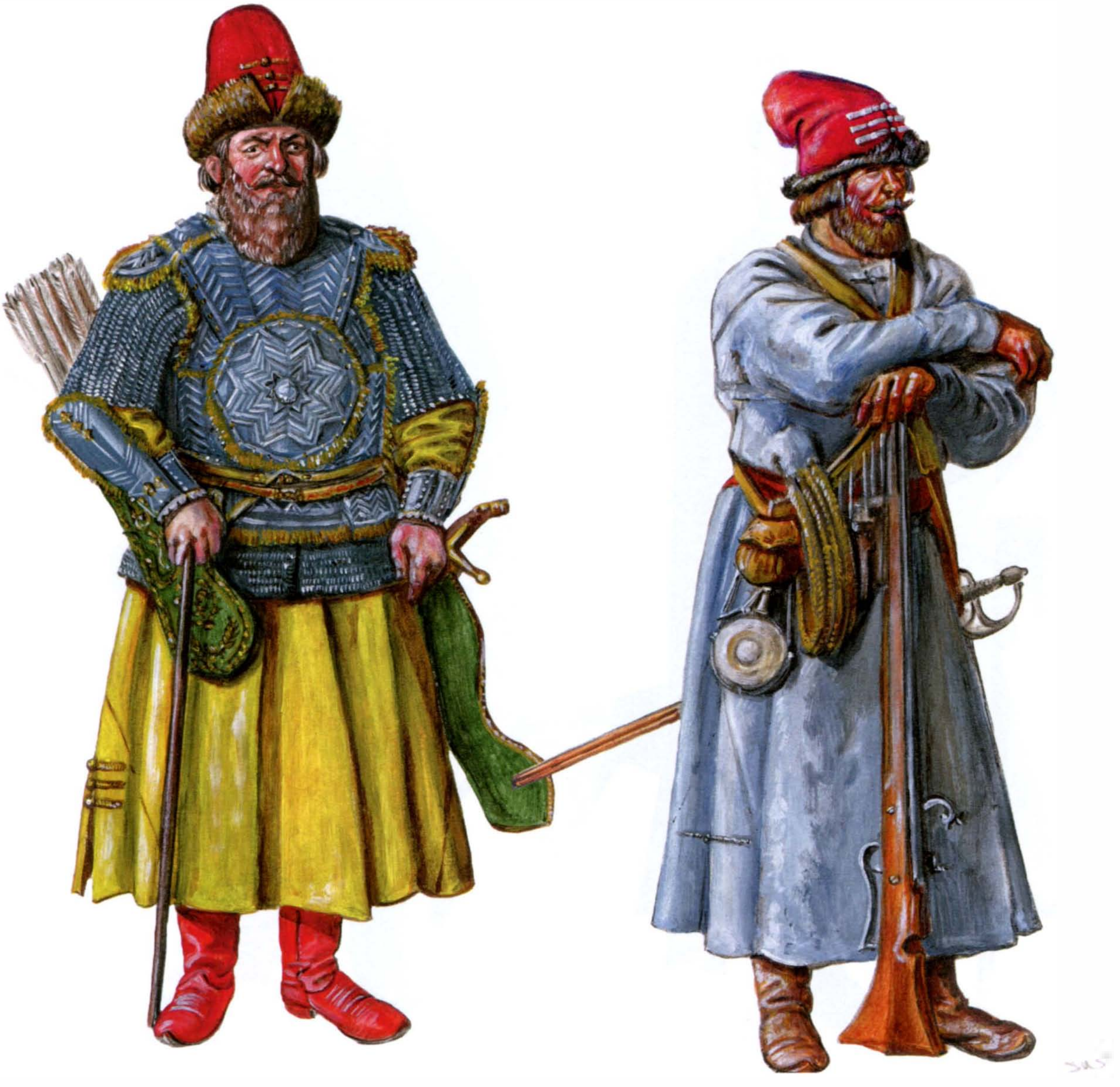


Plate E

E1. Muscovite Voivode; E2. Muscovite Strelets

(Illustration by Sergey Shamenkov, © Helion & Company)

See Colour Plate Commentaries for further information.

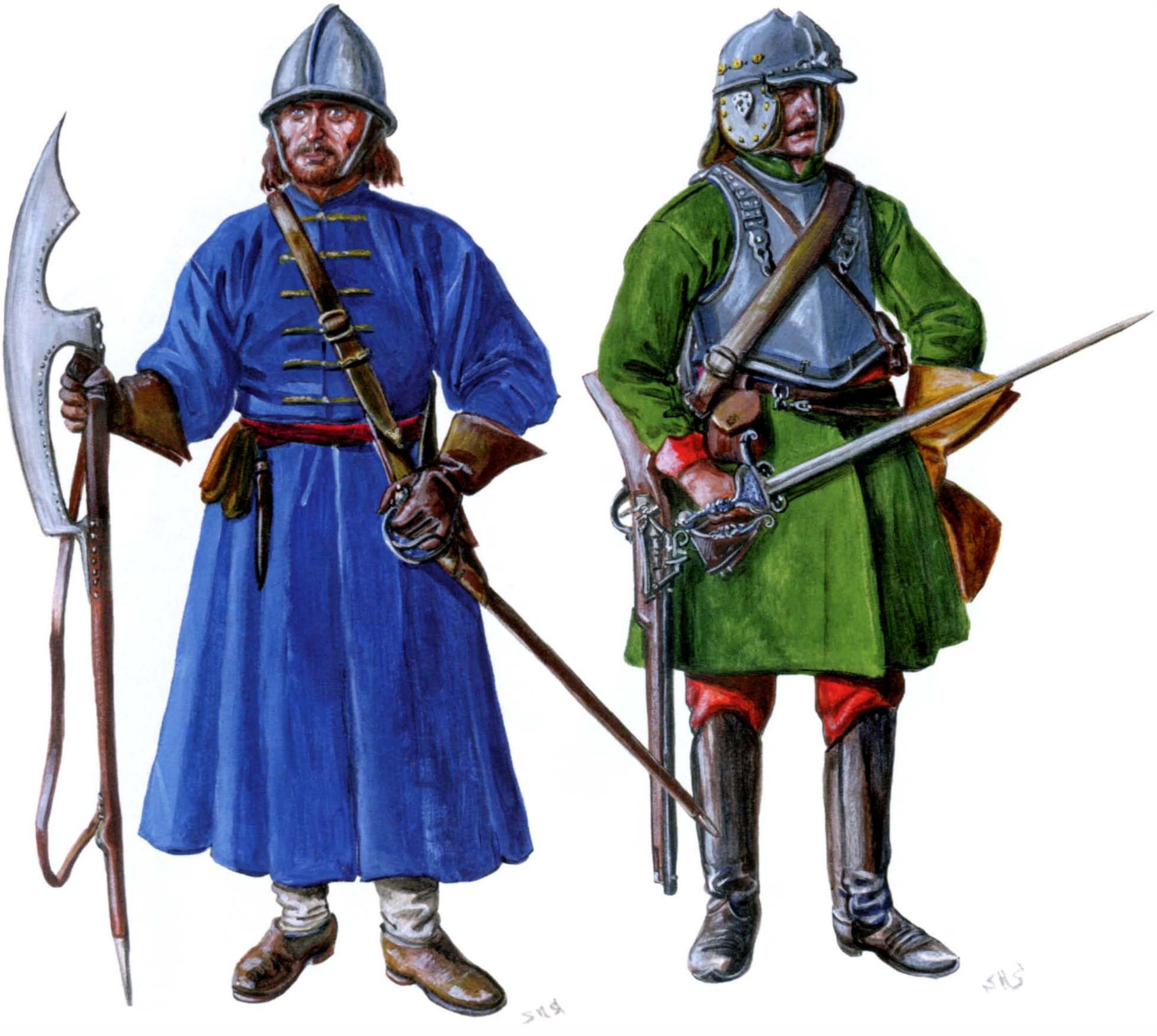


Plate F
F1. Muscovite Infantry Sergeant, Aggey Shepelyov's Selected New Formation Infantry Regiment; F2. Muscovite New Formation Cavalry Sergeant, Fyodor Wormser's Cavalry Regiment
(Illustration by Sergey Shamenkov, © Helion & Company)
See Colour Plate Commentaries for further information.

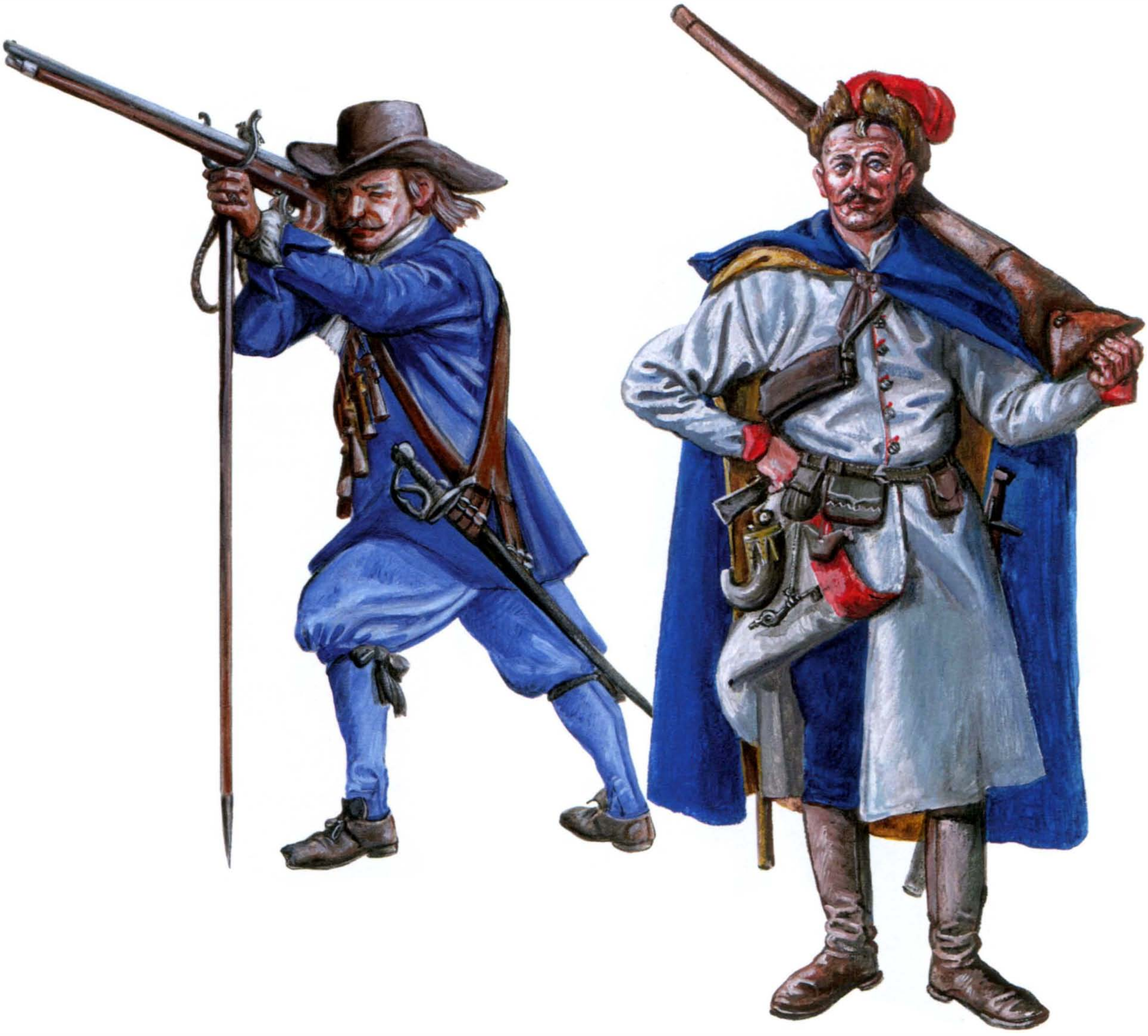


Plate G

G1. Brandenburg Musketeer, Johann Georg von Sieberg's Regiment of Foot;
G2. Ukrainian Cossack Officer or Cavalryman, Chernigov Regiment

(Illustration by Sergey Shamenkov, © Helion & Company)

See Colour Plate Commentaries for further information.

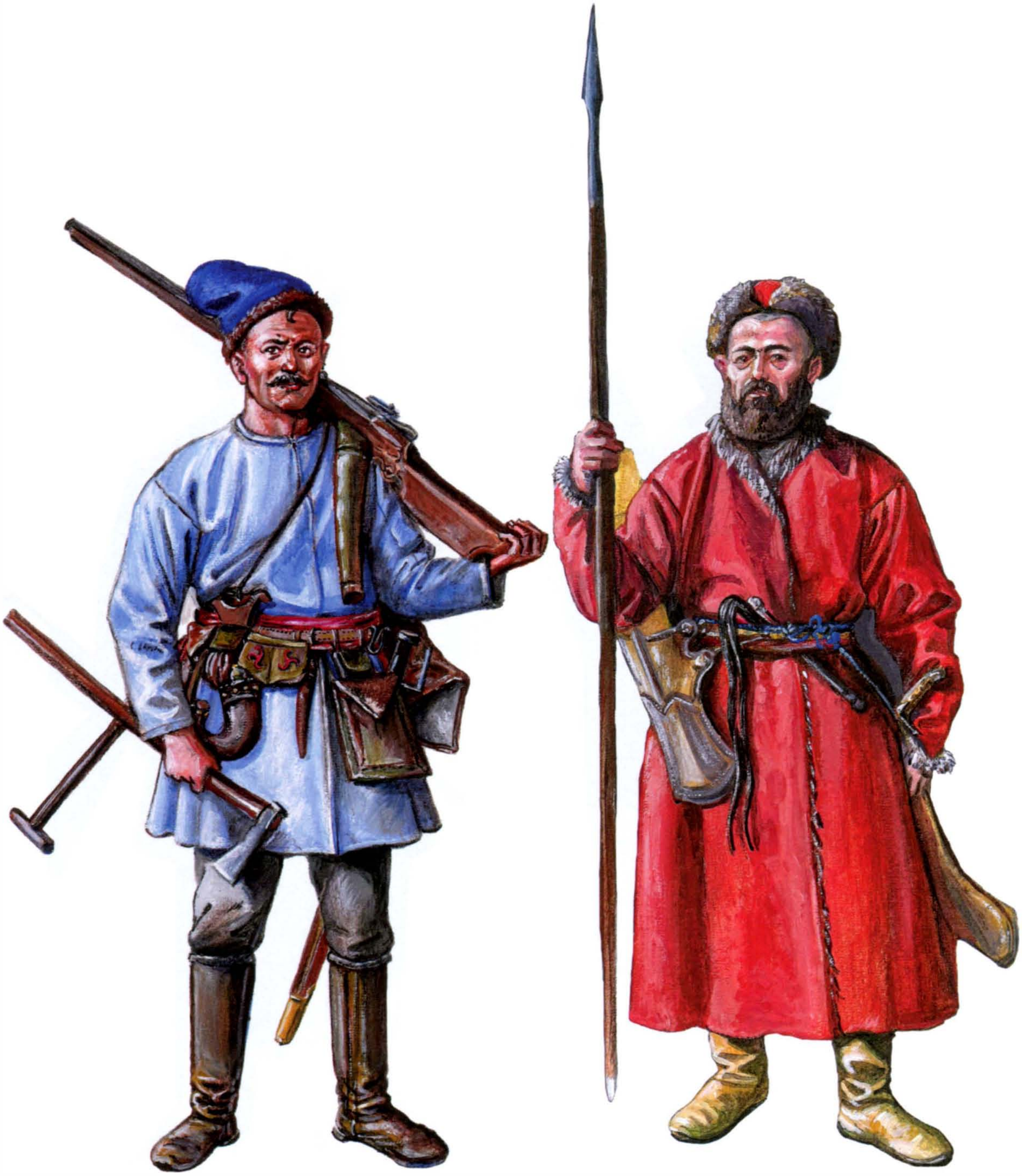
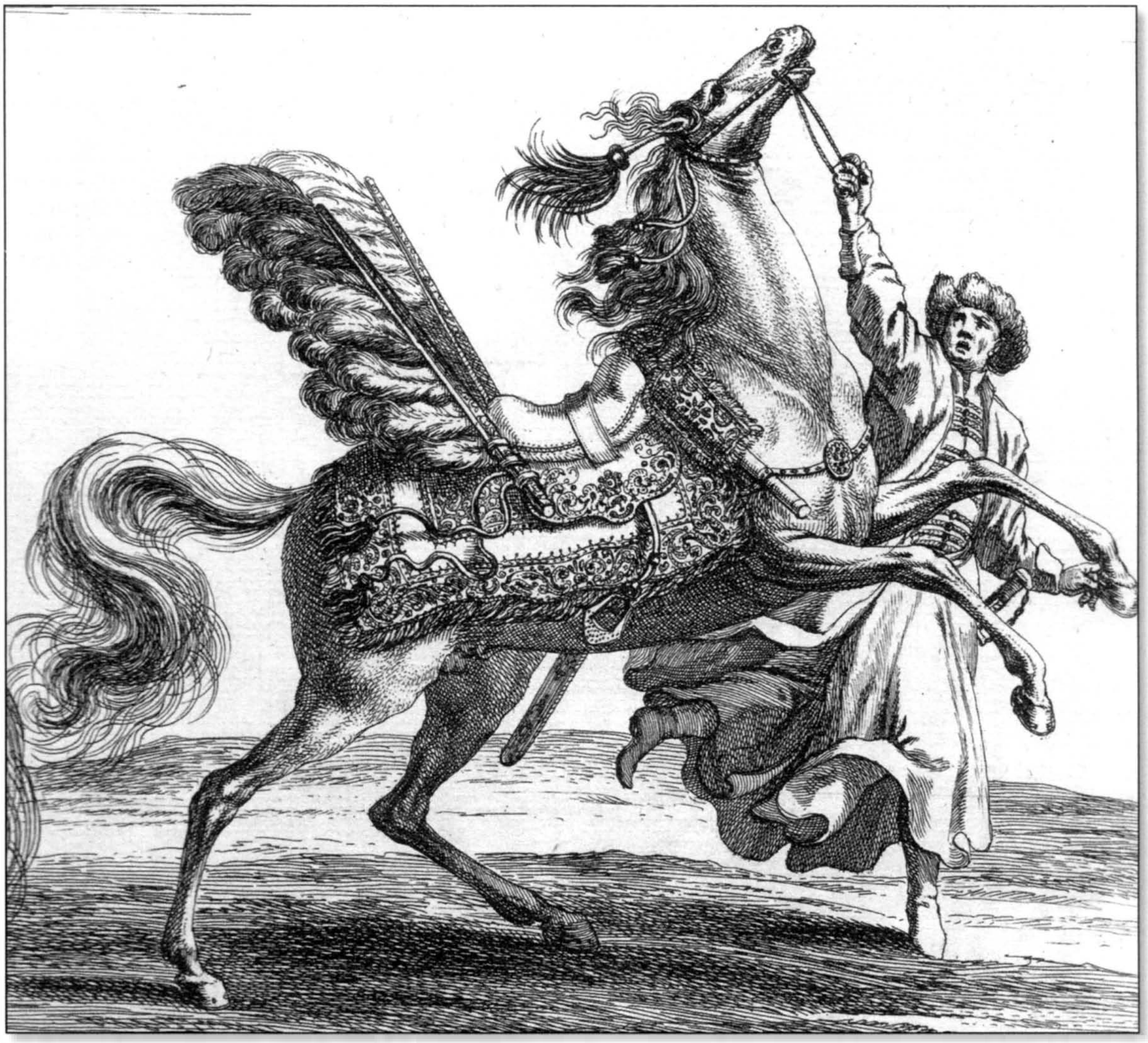


Plate H

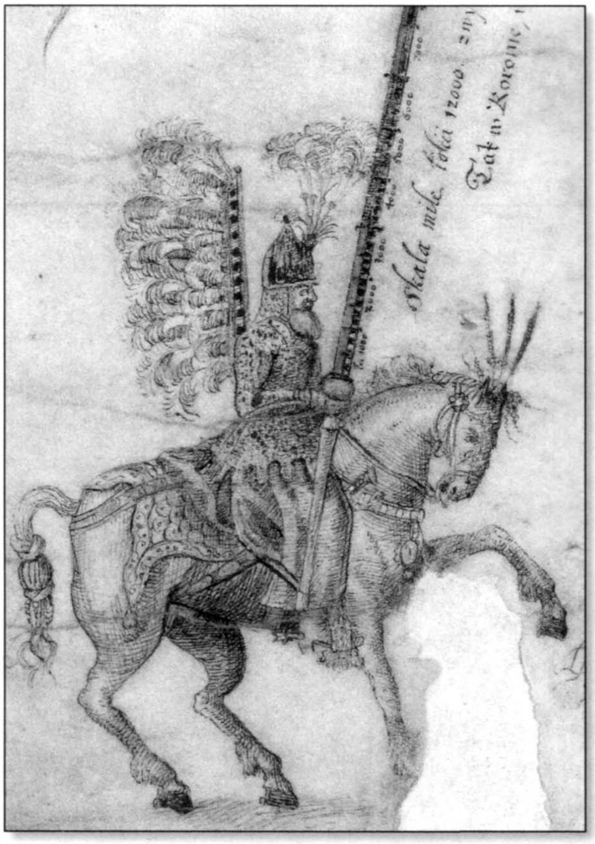
H1. Ukrainian Cossack Infantryman, Priluki Regiment; H2. Crimean Tatar Cavalryman

(Illustration by Sergey Shamenkov, © Helion & Company)

See Colour Plate Commentaries for further information.

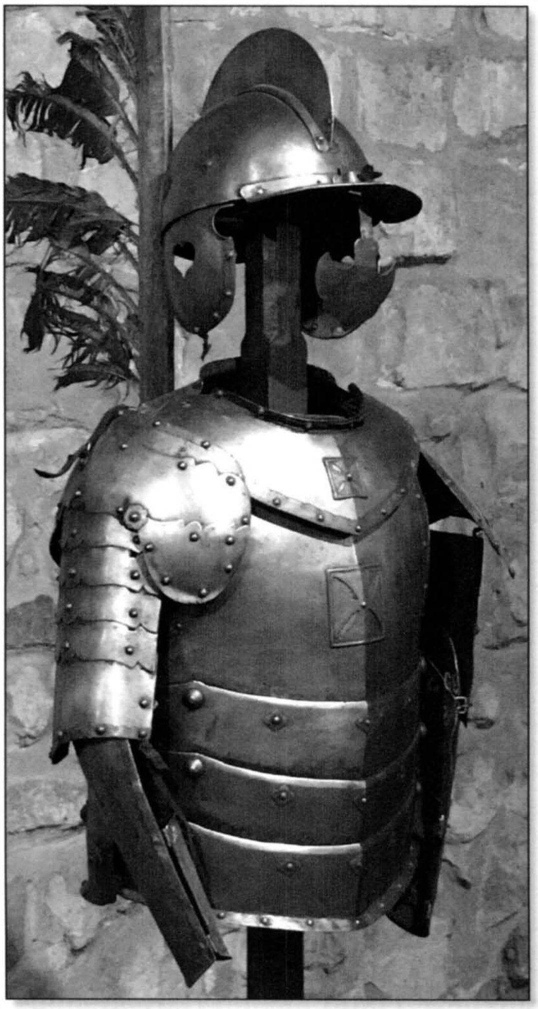


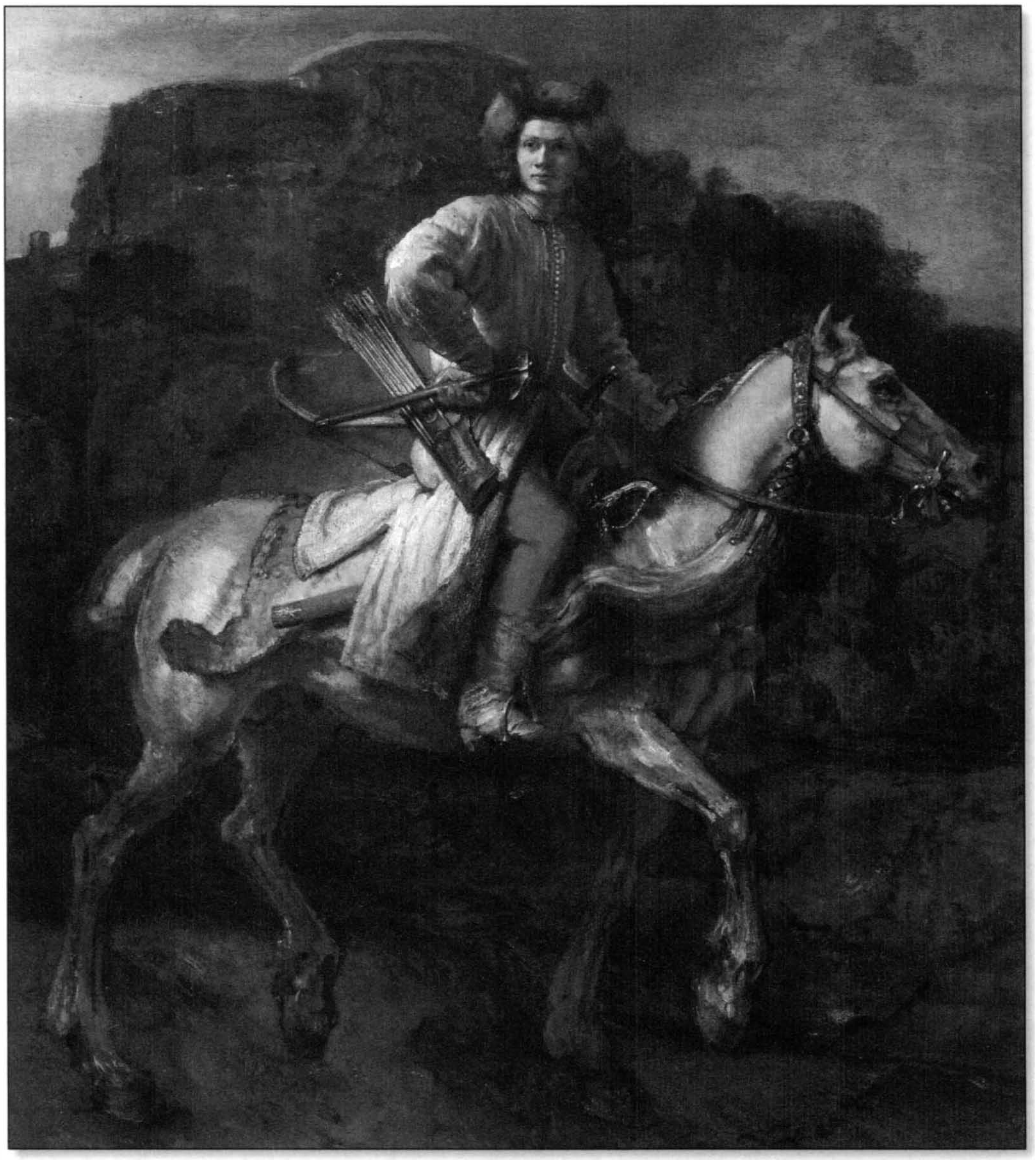
Above: Horse of a winged hussar, but with the wings attached to the saddle in the old manner which apparently remained in use during the Deluge, and with a barely visible palash or armour-piercing sword hung on the left side of the saddle. (David Klöcker Ehrenstrahl, *Certamen equestre*, 1672)



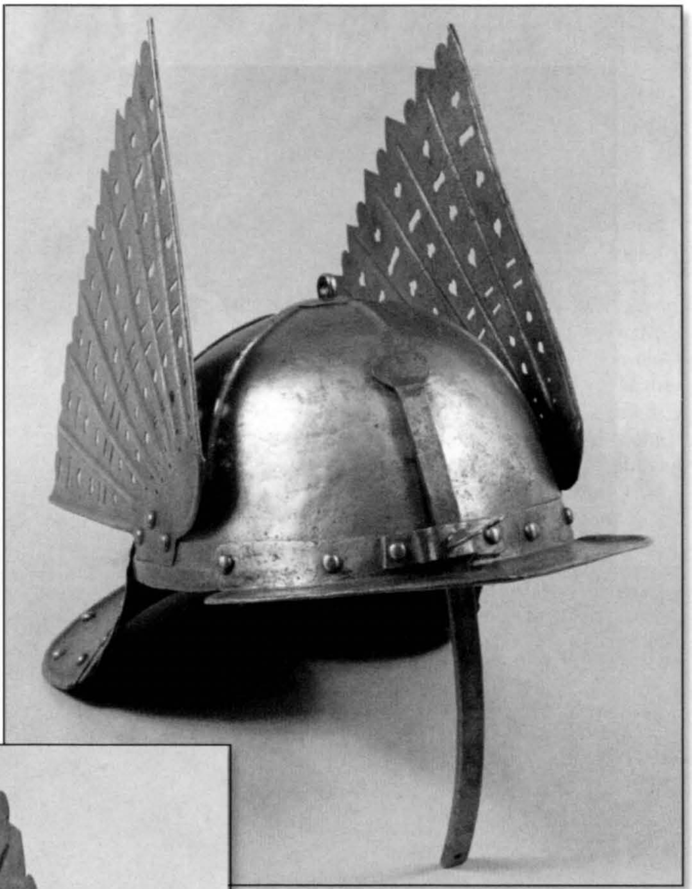
Below: Hussar armour from the second half of the seventeenth century, used by a soldier of the banner of Crown Grand Hetman Stanisław Jan Jabłonowski, who fought at Vienna in 1683. Since armour was valuable, it may well have been used during the Deluge, especially so since Jabłonowski and his banner then were very active, fighting under Stefan Czarniecki and Stanisław 'Rewera' Potocki, as well as Jerzy Sebastian Lubomirski. Unlike the suits of splendid hussar armour most often illustrated, the group to which this one belonged carried only one wing each, mounted on the back. (Museum-Arsenal, L'viv Historical Museum)

Above: Lithuanian hussar, 1645. The depiction was used for a map, which explains why the lance is drawn as a scale indicator – certainly not the normal manner in which a lance was painted. Otherwise, the depiction shows some of the differences in appearance between Lithuanian and Polish hussars. This hussar, for instance, wears a *pancerni*-style chainmail cuirass, not half-armour like the wealthier Polish hussars. Yet more conspicuously, he wears a full beard in the manner of northern Ruthenians and Muscovites. (Biržai Region Museum Sėla, Biržai, Lithuania)

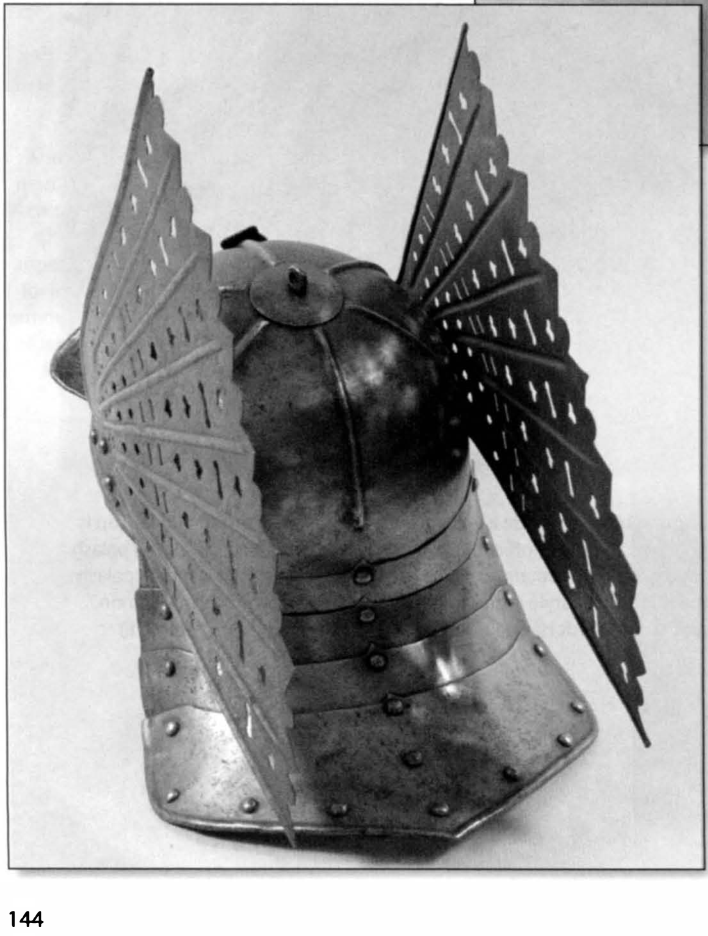


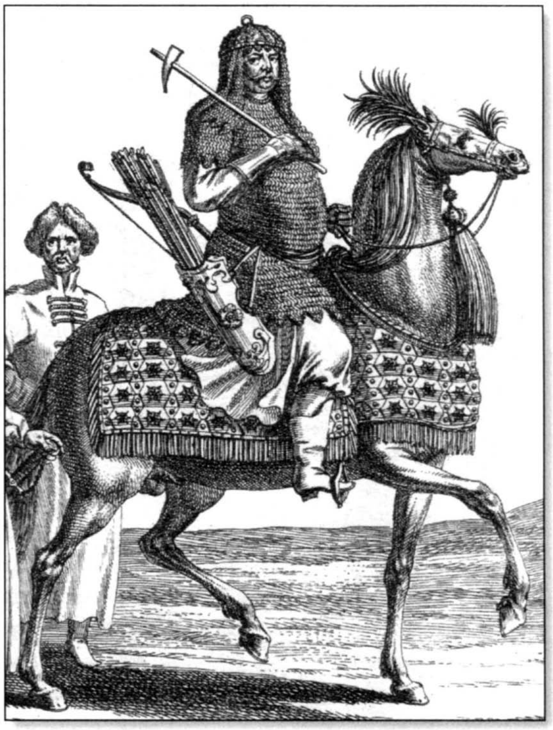


Above; Young Polish officer, c. 1655. In this painting by Rembrandt, a young horseman wearing caftan and fur cap is depicted with a war hammer, which identifies him as a noble or officer, composite bow, sabre, and palash. The palash is depicted incorrectly, as a curved sabre instead of straight broadsword, so we can presume that no genuine palash was available in Rembrandt's workshop. The officer's hairstyle is one from Western Europe, which was common among Poles who left the Commonwealth. (Rembrandt Harmenszoon van Rijn; Frick Collection, New York)



Shishak helmet with wings, of the type in the Commonwealth known as a Pappenheimer, so named after the famous Imperial cavalry commander Pappenheim in the Thirty Years' War. (Army Museum, Stockholm, AM 090407)





Above: The aforementioned Lieutenant Colonel Zacharias Gamoiski armed and equipped as a *pancerni* with bow and arrows. (David Klöcker Ehrenstrahl, *Certamen equestre*, 1672)

The *pancerni* cossacks are best known for their use of chainmail cuirasses and the *misiurka* helmet (from *Misr*, Arabic for 'Egypt', a term derived by way of Russian *misyurka*, of the same origin). Despite its name, this type of helmet was of Inner Asian origin and also very common in Persia and on the Indian subcontinent. The subtype of this helmet most common in the Commonwealth was a low variant characterised by the small, round metal plate which only covered the crown of the skull (a style known in Persian as *kulah-zirah*). This type of helmet came with a long chainmail coif or neckguard, which was fastened under the chin when preparing for battle. Many no doubt wore the chainmail coif unfastened when no danger was expected. The helmet included a significant layer of padding underneath the round metal plate, which made it look taller.

Although the *misiurka* was closely associated with the *pancerni*, a *pancerni* cossack-style cavalryman might instead wear the *szyszak* helmet of hussar fame, just as some hussars instead wore the *misiurka* helmet.

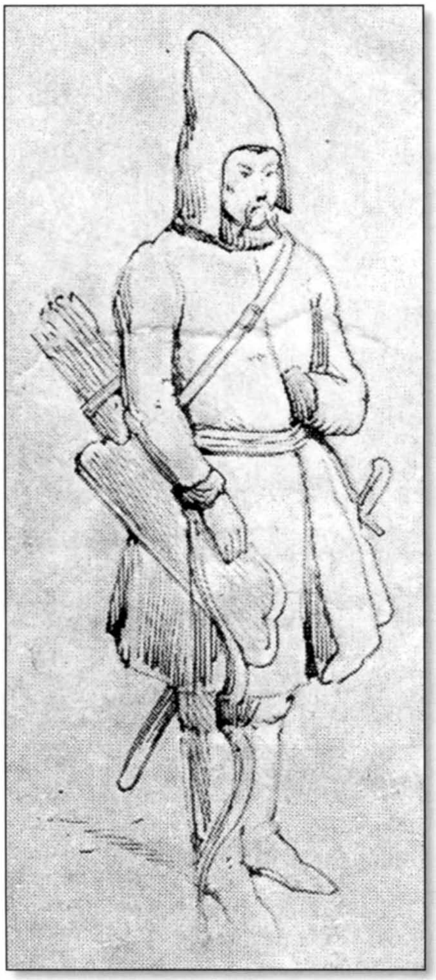
The Lithuanian *pancerni* differed slightly from those raised elsewhere in the Commonwealth. The Lithuanian *pancerni* seem more commonly to have been of Tatar or Circassian origin (and were hence often known as *Petyhorcy*; see below) than their counterparts in the Crown Army. They were also differently armed: in similarity to some Muscovite and Caucasian troops most carried, instead of firearms, a 2.5 m bear spear (a heavy spear with a leaf-shaped head, known as *rogatina* or, in Ruthenian, *rohatyna*) and a short lance (*dzida*), about 1.8 to 2.0 m long. The lance derived from a type of javelin (known as *djid*, a term from the Caucasus) which previously was in widespread use and remained common in Muscovy.

Tatar Cavalry

In previous centuries, a number of Tatar and Circassian groups because of the fortunes of war ended up on the territory that would become the Commonwealth. Most found themselves settled in the Grand Duchy of Lithuania, where some of their descendants in modern-day Lithuania and Belarus still recognise their origin. Known as Lipka Tatars or Lithuanian Tatars (the term Lipka derived from the Tatar name of Lithuania), many married Christian women, although they and their offspring remained Muslims, and over time most adopted the Ruthenian language. Their nobles commonly learnt Polish.[26]

---

[26] On the Lipka Tatars, see Stanisław Kryczyński, 'Tatarzy litewscy: Próba monografii historyczno-etnograficznej', *Rocznik Tatarski* 3 (1938).



Lithuanian Tatar, so-called Lipka Tatar, 1676.

The fact that some assimilation took place with the locals should not be interpreted as the disappearance of Tatar lineages and customs. Among the many Tatar nobles who fought in the wars of the Deluge was Prince Jan, also known as Janbek and Jan Carewicz (the last name being the Polish version of Tsarevich, 'Prince'). Prince Jan, a 22nd-generation descendant of Genghis Khan, served as rotamaster in the Tatar Banner of the Royal Guard. One of his ancestors, a nephew of the last khan of the Great Horde, had settled in the Grand Duchy after 1502, when the Great Horde was defeated by an alliance of the Crimean Khanate and Muscovy. Prince Jan fought in the war against Muscovy and distinguished himself in the battle of Chudnovin 1660. In 1661 he refused to participate in the major protests within the army against the policy of King John Casimir, in which numerous units and commanders took part, but remained loyal to the King. In 1665, his banner included 86 'horses', of which Prince Jan himself provided 12. Prince Jan survived the war and remained in command of his Tatars into the eighteenth century.[27]

Most notable among the Tatar cavalry (*jazda tatarska*), however, were the Petyhortsy Circassians, who derived from the Caucasus (and strictly speaking were no Tatars, although their chiefs were related to the Tatar nobility).In 1561, a number of Kabardian princes opposed to Muscovy and, more importantly, their local rivals who had allied with Muscovy, left the territory in the Caucasus known as the Five Mountains, Instead, they brought their Circassian followers to Poland to petition for help. The Polish King granted them refuge, so in 1562 five Kabardian princes (known in Poland as Onyszko/Aleksander Kudadek, Kassim and Gawrila Kambulatowicz, and Kudadek's relatives Solgien and Temruk Szymkowicz) moved permanently to Poland with their families and 300 men. Most were, or became, Christians but a number remained believers in the old animist religion. Since they came from the Five Mountains, they became known in Poland as Petyhortsy (Polish: *Petyhorcy*), which was the Polish pronunciation of the Russian name of their ancestral home. These men formed the backbone of a number of special Petyhortsy cavalry regiments in Polish service, which for decades regularly came to receive fresh volunteers from the Five Mountains Circassians.[28]

Not all Petyhortsy Circassians who went to Poland ended up in Polish service. Some served in Crimean Tatar armies. Others forgot their earlier animosity and went into Muscovite service. In either case, the Petyhortsy retained their traditional dress (red and grey caftans with shaggy fur cloaks) and weapons, primarily lance, composite bow, and chainmail.

---

[27] Stanislav V. Dumin, 'Tatarskiye tsarevichi v Velikom knyazhestve Litovskom (XV–XVIII vv.)', *Zolotoordynskoye obozreniye* (*Golden Horde Review*) 4: 2 (2016), pp.385–419, on pp.405–6.

[28] See, for example, Amjad Jaimoukha, *The Circassians: A Handbook* (New York: Palgrave, 2001), pp.117–18.

By the time of the Deluge, the Petyhortsy no longer seem to have constituted a notable part of the Commonwealth military establishment (although small units of Petyhortsy still existed and they would regain a measure of importance after 1672). However, other units of Tatar cavalry still played a major role, and in particular in the Grand Ducal Army of Lithuania. Whenever the Levy of the Nobility was raised, or upon the King's request, the Tatars in the Commonwealth were expected to provide men, too. Other Tatars served for pay in the various armies within the Commonwealth. Tatar cavalry served in Commonwealth-style banners of 60 to 200 men. By 1659 the Commonwealth's Komput armies included 23 Tatar banners. On average, a banner counted from 100 to 120 horsemen.[29]

Chainmail-armoured cavalry of this kind formed a major part of the better-armed cossack-style cavalry. When the Commonwealth after the 1648 cossack rebellion in the Ukraine began to refer to the loyal cossack-style cavalry as *pancerni*, the Petyhortsy and Tatar cavalry constituted a major part of what henceforth became referred to as *pancerni* cavalry.

Wealthy Tatars wore a hussar-style wing on their back, in the hussar manner. Composite bow and sabre constituted the most common armament, except for nobles and Petyhortsy who, as noted, wore armour and carried spears (*rogatina*).

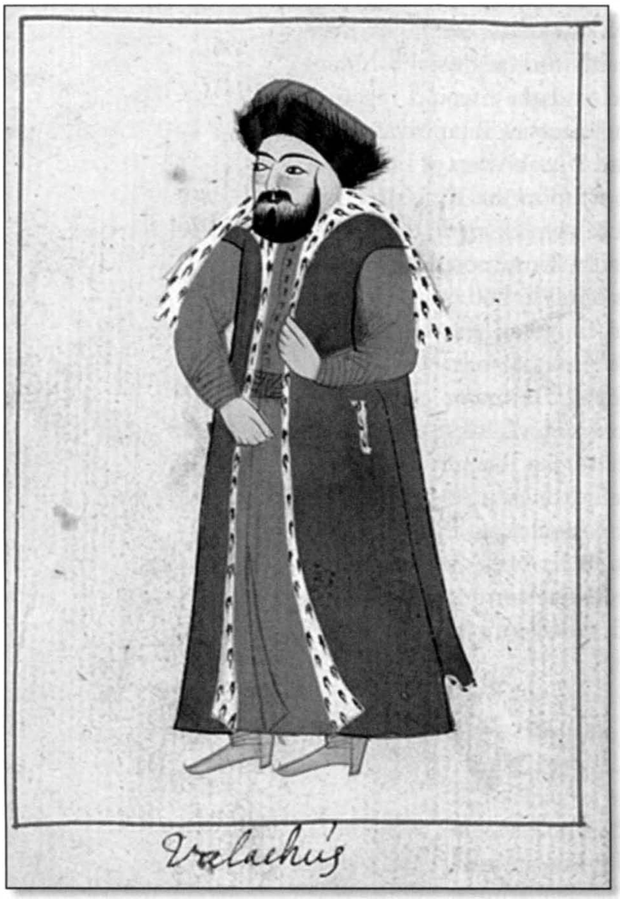
Wallachian Light Cavalry

Over time, and in a development that went contrary to the trend both elsewhere in Europe and Muscovy, Commonwealth hussars and cossack-style cavalry chose to acquire increasingly more and heavier armour. By the mid seventeenth century, at a time when the fighting men among Swedes, Imperials, and Muscovites alike had abandoned most or all armour, the originally lightly armoured Commonwealth cavalry chose the opposite path and those who had the means acquired either half-armour or a combination of chainmail and plate (the hussars) or chainmail armour (the *pancerni*). The increasingly heavy armour had not yet reduced their mobility in battle. However, the expensive investments in additional armour made duties involving large-scale reconnaissance, raiding, and foraging increasingly unpopular.

For this reason the Commonwealth instead began to recruit company-sized banners of unarmoured cavalry raised abroad, particularly in Wallachia (a region in modern-day Romania, located south of Transylvania and north of the Danube). Like neighbouring Transylvania, Wallachia was under Ottoman suzerainty. When real Wallachians were unavailable, the numbers were filled out by Commonwealth cavalrymen, enlisted among those men who lacked the resources to serve as *pancerni*. Some adopted Wallachian dress (which resembled Hungarian dress but with large fur caps), while others dressed in what vaguely was referred to as Tatar style. Either way, their

---

[29] Igor' B. Babulin, *Bor'ba za Ukrainu i bitva pod Konotopom 1658–1659 gody* (Moscow: Russkiye Vityazi, 2015), p.90.



Wallachian, from a drawing in an Album of Costumes acquired in Constantinople in 1657–1658 by Claes Brorson Rålamb, the Swedish envoy to Ottoman Sultan Mehmed IV and to the Sublime Porte. He wears a red dolama with a fur-lined, blue-green overgarment.

dress presumably differed little from the other types of Eastern garments habitually used in Commonwealth armies. Regardless of origin, they were commonly known as Wallachian cavalry (*jazda wołoska*). Customarily armed with composite bow and sabre, or in some cases with wheellock pistols, some also carried spears or lances. Wallachian cavalry typically fought unarmoured.

By 1659, the Commonwealth employed 18 Wallachian banners. Each consisted of, in most cases, 100 to 150 cavalrymen.[30]

Dragoons

Dragoons were mounted infantry. The main tasks of Commonwealth dragoons (Polish: *dragonia*) were reconnaissance, foraging, and the construction of camps, bridges, and field fortifications. Dragoons were organised like the infantry, although commonly in smaller regiments of from 200 to 600 horses. A company would generally consist of 100 to 200 men.

Until 1648, most Commonwealth dragoons were raised from Ukrainian peasants. However, when the uprising got underway, most of them deserted. By the time of the Deluge, dragoons seem to have existed in two varieties: one consisting of soldiers raised from native stock organised in banners, and another consisting of enlisted dragoons of the German type, organised in companies and regiments. There may not have been that great difference in dress and armament between the two, although it seems the German-type dragoon tended to wear a wide-brimmed felt hat while the locally raised dragoon instead wore a fur cap.

By then, all dragoons were armed with muskets. Some carried sabres, and it is possible that some were armed with spears. Many were also issued axes, since they frequently were employed in tasks related to construction labour. Dragoons wore no armour.

Levied Infantry

Levied peasant infantry was not highly regarded by the Commonwealth nobility. In 1633, it was decreed that levied infantry should be equipped with tools such as shovels instead of muskets and that it was unnecessary to give them uniforms. By the time of the Deluge, they were treated no better. However, the need for soldiers meant that levied infantry had to be called up and provided with weapons, not only shovels. There were also attempts to give them a more soldierly appearance through the provision of garments in uniform colours, often blue.

---

[30] *Ibid.*, p.90.

German Cavalry

In the Commonwealth (and, as we will see, in Muscovy), a cavalryman of the Continental style was known as a *reiter* (Polish: *rajtar*), from the German term *Reiter* ('horseman'). Reiter regiments (Polish: *rajtaria*) generally rode heavier horses than those used by native Commonwealth cavalry. By the time of the Deluge, they generally wore no more armour than breastplates and/or buff coats, although perhaps with the addition of a lobster-tailed pot helmet (*zischägge*), which corresponded to the *szyszak* helmet of the hussars and other traditional horsemen.

King John Casimir rated his German cavalry highly. This was perhaps unsurprising, since they did not display the severe disciplinary problems prevalent in almost all Commonwealth cavalry units and in particular in the hussars. Following the loss of the Quarter army at Batog in 1652, King John Casimir was so desperate to retain his German cavalry that he paid them more than the hussars. The German cavalry received 260 złoty per year compared with only 164 for hussars. Even when hussar pay rose to 204 złoty per year, the German cavalry remained better paid. Moreover, for the next decade King John Casimir employed German cavalry in numbers which significantly outnumbered his hussars.[31]

There was little difference in organisation, equipment, dress, and training between those cavalry units which enlisted for Commonwealth service and those which served in the Swedish, Brandenburg, or Imperial army. In fact, before the truce between Sweden and the Commonwealth ended in 1655 enlisted Swedish cavalry companies from Livonia served in at least the Lithuanian Army.

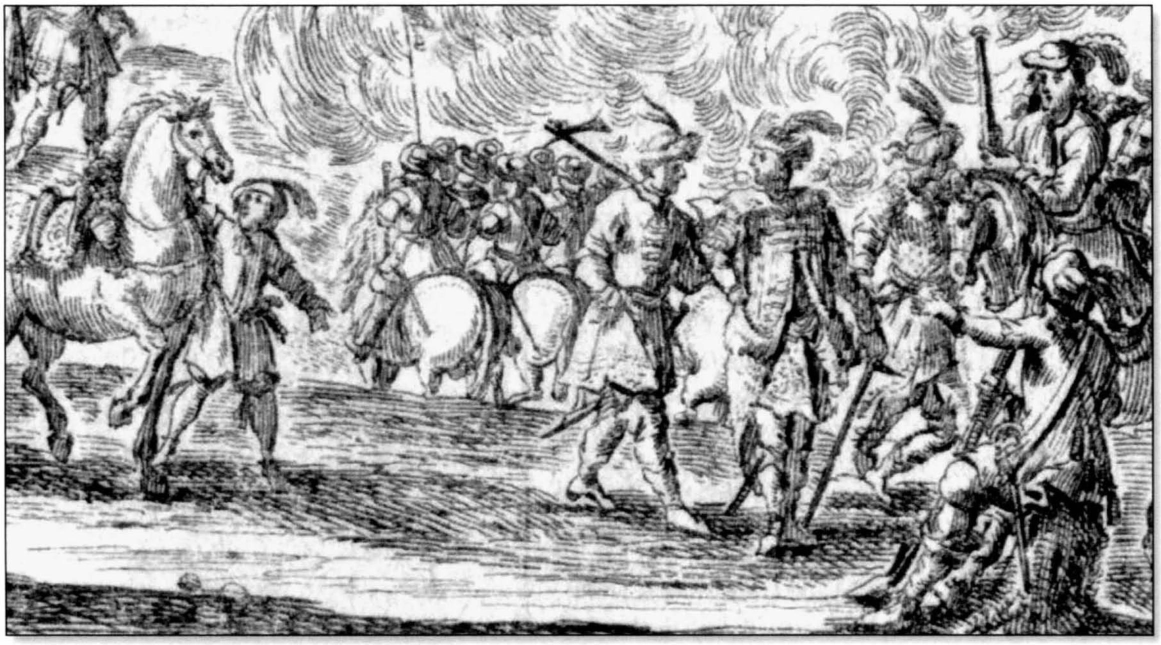
German cavalry officers in Commonwealth service may have worn red sashes, in imitation of those employed within the Imperial army.

German Infantry

In similarity to the situation with the German cavalry, what in the Commonwealth was known as German infantry consisted of enlisted infantry regiments in the Continental style. As with the German cavalry, many units were influenced by Swedish practices. Organisation, equipment, dress, and training did not differ from enlisted regiments in Continental Europe. About a third of the men were commonly pikemen, at least some of whom would

---

[31] Wimmer, *Wojsko polskie*, pp.240, 259.



German cavalry and officers in Polish dress at Sandomierz, 2 April 1656. (Erik Dahlbergh)

be armoured, while the remaining two-thirds were unarmoured musketeers. Most regiments brought some regimental artillery in the Swedish manner.

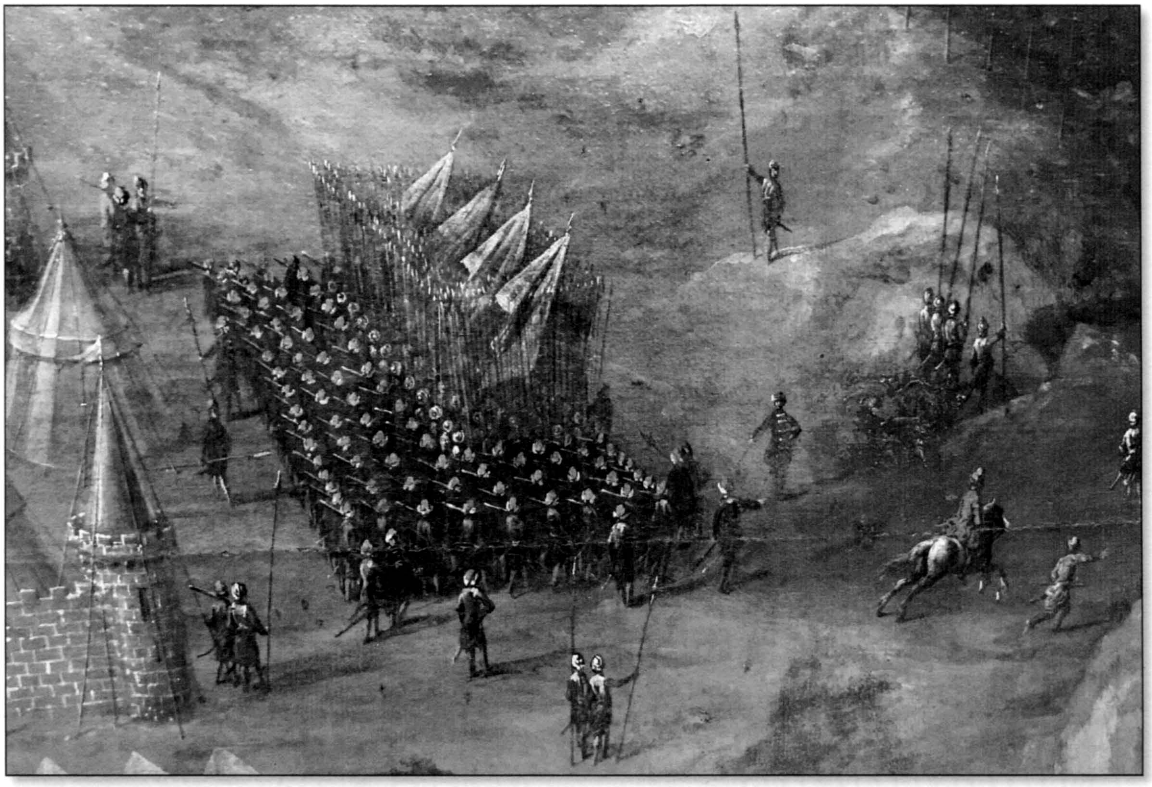
A special note should be made of the Danzig Army, which consisted of 2,000 enlisted infantry (which by March 1656 had been raised to 3,000, and by early 1659 may have reached 4,000), under Colonel Valentin von Winter (1608–1671), a veteran of the Thirty Years' War who then had served in the Swedish army. In addition, Danzig could raise burgher militia, likewise equipped in the German manner. Since 1646, the Danzig burgher militia consisted of five regiments, one for each city quarter (*Koggen-Qvartier, Hohes Qvartier, Breites Qvartier,* and *Fischer-Qvartier*) and a fifth based on the suburban region (*Vorstadt*). The burgher militia had a total strength between 5,000 and 7,000 men.[32]

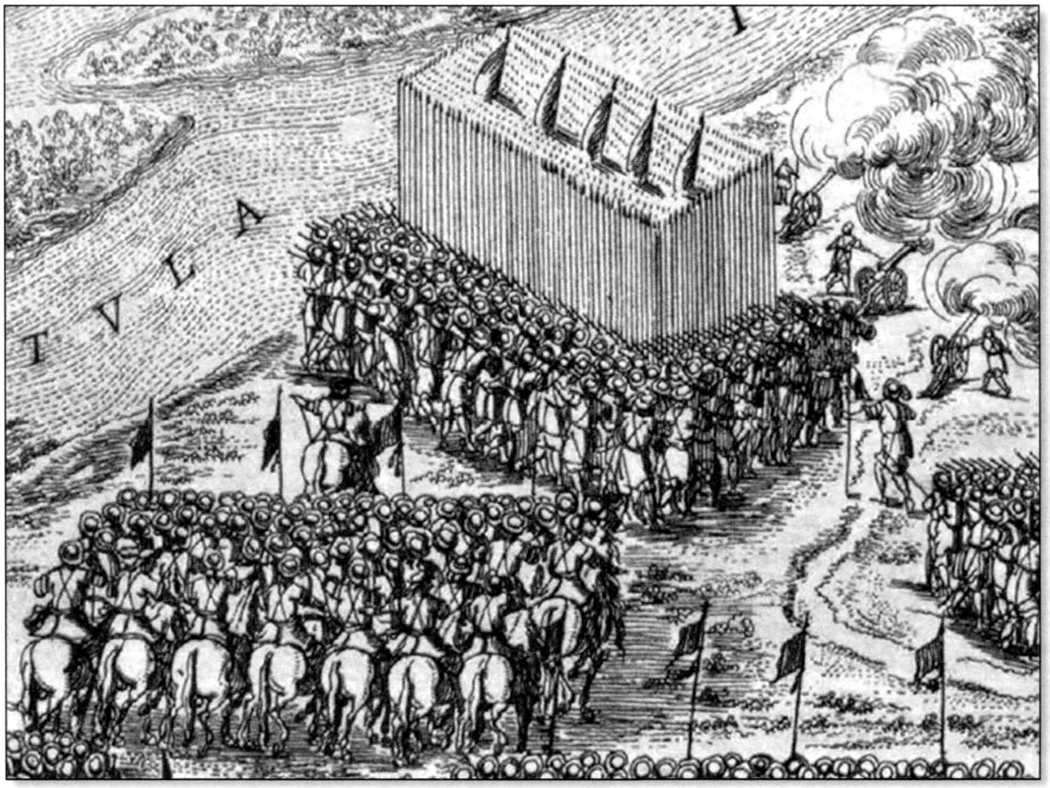
Artillery

The artillery was greatly modernised and reformed based on what Commonwealth artillerymen learnt from the Thirty Years' War. First, a new tax, known as the *dupla* ('doubling', in effect a new quarter in addition to the one then used to finance the Crown Army, although still calculated at the

---

[32] Peter Voget, *Wahrhaftiger und gründlicher Bericht von Belagerung und Eroberung der Haupt-Schanze in der Danziger Nährung* (Danzig: David Friedrich Rhete, 1661), p.10; Gustav Köhler, *Geschichte der Festungen Danzig und Weichselmünde bis zum Jahre 1814 in Verbindung mit der Kriegsgeschichte der freien Stadt Danzig* 1: *Bis zum Jahre 1734* (Breslau: Wilhelm Koebner, 1893), 353; Hahlweg, *Das Kriegswesen der Stadt Danzig* 1, pp.47, 172; Wimmer, 'Armé och finansväsen', p.94 n.116; Leszek Podhorodecki, '1659 årsfälttågi Kungliga (Polska) Preussen', Arne Stade and Jan Wimmer (eds), *Polens krig med Sverige 1655–1660: Krigshistoriska studier* (Stockholm: Kungl. Militärhögskolan, *Carl X Gustaf-studier* 5, 1973), pp.295–323, on p.319 n. 19.

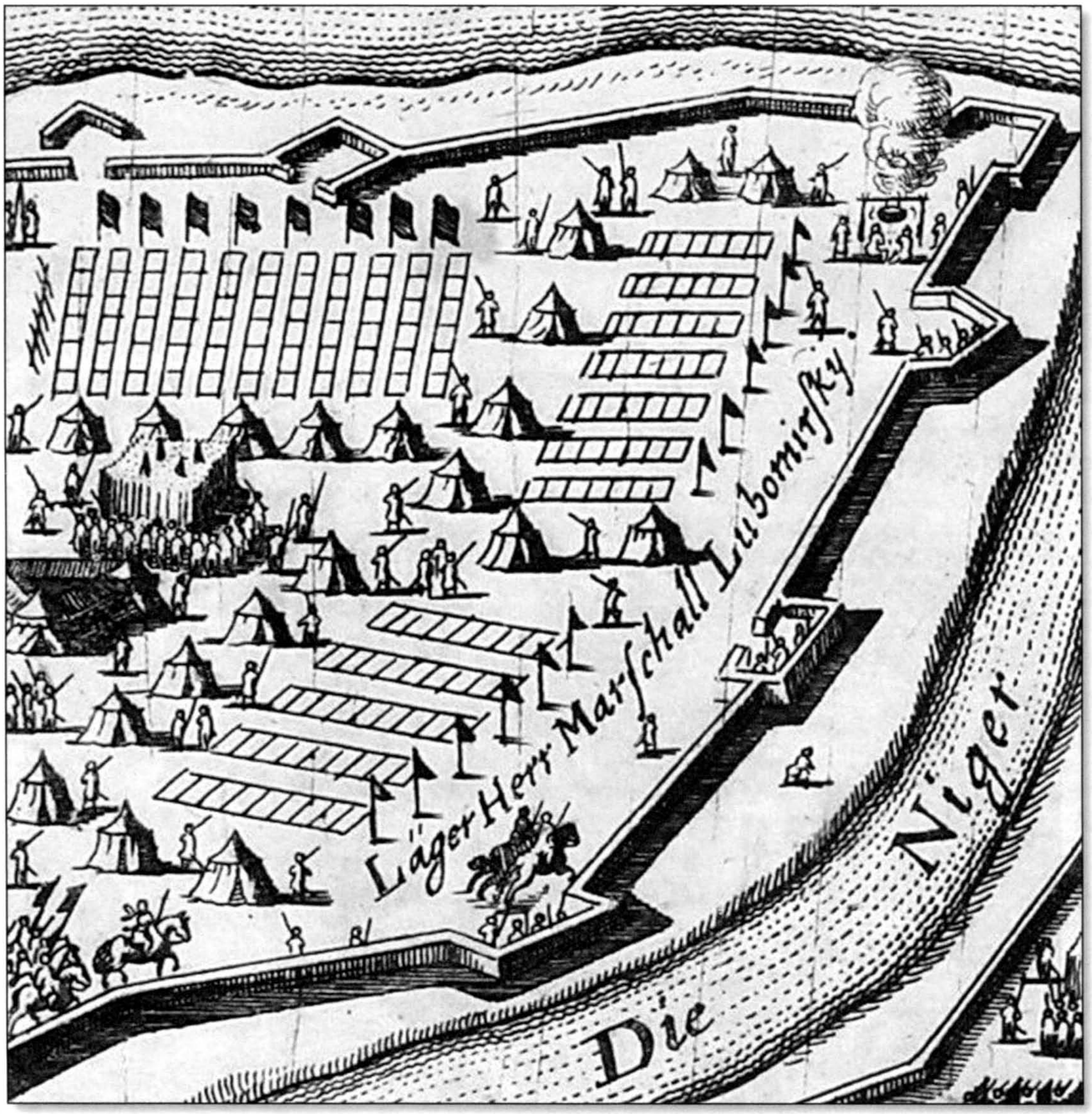


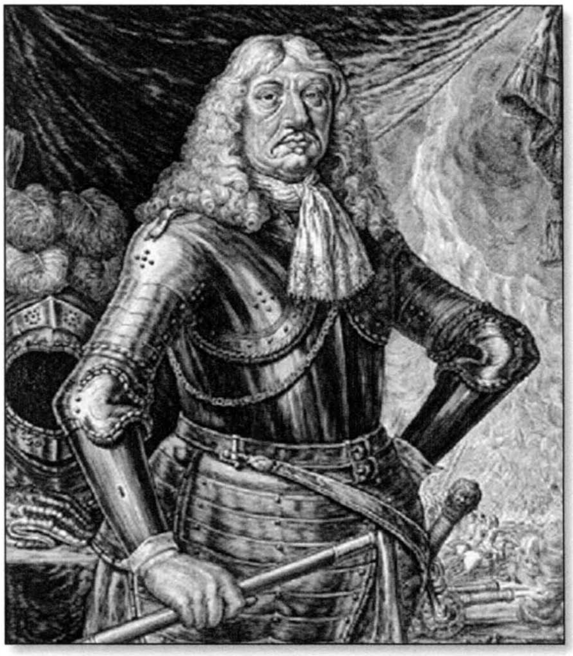

TVLA

Previous page, top: German infantry at the battle of L'vov, 1675. Although depicted 20 years after the Deluge, this German-style infantry still forms up in the customary Continental manner and, moreover, the pikemen still wear breastplates, backplates and helmets. However, the musketeers wear traditional fur-lined caps and officers also wear caftans. It is likely that much of the Commonwealth's German infantry wore similar styles already during the Deluge. (Contemporary painting, L'viv Historical Museum)

Previous page, bottom: The customary Continental manner of forming up infantry and cavalry in the Commonwealth, apparently in common use with German infantry regardless of which army they served in. The Swedish infantry organisational structure enabled this formation in addition to several others, and it is likely that Swedish practices still influenced German infantry in other armies. (Pufendorf, after Erik Dahlbergh's depiction of the crossing of the San, 3-4 April 1656)

Below: Jerzy Sebastian Lubomirski's camp, in a well-fortified position on the River Schwarzwasser (Polish: Czarna) in Prussia. As noted, the German infantry in the Commonwealth made camp in the manner common elsewhere in Europe.





Valentin von Winter.

original rate), was introduced in 1632 to fund the endeavour. New cannon foundries and arsenals were built and put to use. Large numbers of cannons were manufactured. Two artillery corps were established, one for the Crown Army and the other for the Lithuanian army, and for each a general of artillery was appointed. In addition, all cities, large towns, and many magnates employed their own artillery forces. By 1654, the Commonwealth artillery consisted of over 600 pieces of ordnance, in a range of calibres up to 24-pounders. Most, 372 pieces, belonged to the Crown Artillery.[33] In imitation of the Swedish model, mobile regimental artillery was attached to infantry battalions and deployed in the intervals between units. As a result of the reforms, the Commonwealth artillery at the time of the Deluge corresponded to Continental standards.

Having said this, funding remained insufficient, and the vast range of calibres employed posed significant logistical problems. Moreover, field artillery units were based only in L'vov and Kamenets Podol'skiy in the Ukraine, not in Poland or Lithuania.[34] Besides, the Commonwealth artillery was still characterised by many improvisations and lacked the smooth operational procedures and logistics mechanisms of, for instance, the Swedish and Imperial artillery. The cavalry-based Commonwealth armies were seldom able to bring along their heavier cannons, even when such were needed. The reason was that the artillery lacked integral logistics units and instead must be transported by levied peasants who, it was assumed, would bring their own horses to pull the cannons.[35] Furthermore, much of the new Commonwealth artillery was quickly lost during the Deluge: not in battle but because entire armies, fortresses, and towns rapidly surrendered, together with their artillery, and instead swore fealty to Sweden.

Artillerymen dressed in a variety of garments. In the early days, they had usually followed German fashion but over time an increasing number could be found wearing Eastern dress, or a combination of the two.

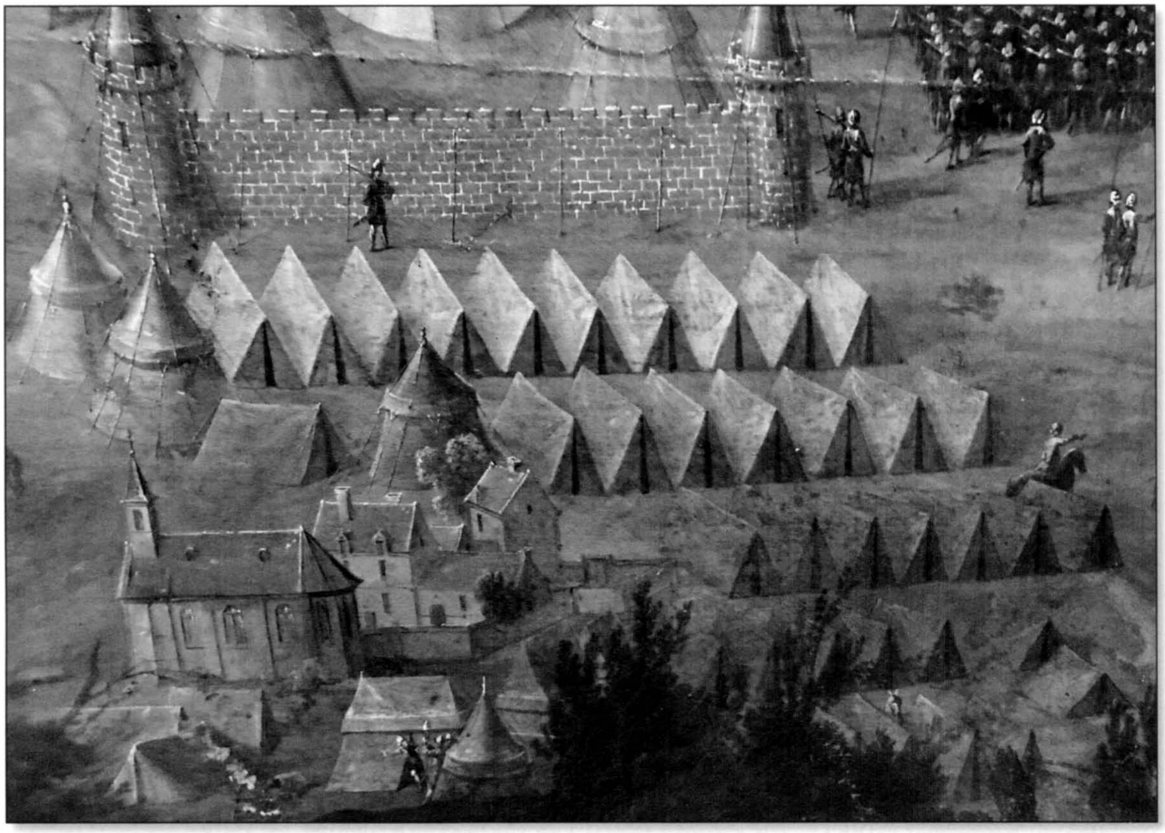
The Commonwealth's most notable artilleryman was the Crown General of Artillery, Krzysztof Grodzicki (d. 1659), who served in this position from 1653 until his death. He had fought the Swedes in Prussia in the late 1620s, studied in the Dutch Republic, and then served in the Imperial army under Wallenstein during the Thirty Years' War. In the 1640s he fought cossacks and Tatars. The Commonwealth artillery employed the Imperial

---

[33] Tadeusz Marian Nowak, 'Det polska kronartilleriet före och under det polsk-svenska kriget 1655–1660', Arne Stade and Jan Wimmer (eds), *Polens krig med Sverige 1655–1660: Krigshistoriska studier* (Stockholm: Kungl. Militärhögskolan, *Carl X Gustaf-studier* 5, 1973), pp.103–129, on p.105.

[34] *Ibid.*, p.119.

[35] Hedberg, *Kungl. Artilleriet: Yngre vasatiden*, p.168.



Commonwealth camp, outside L'vov, 1675. The German infantry in the Commonwealth made camp in the same manner as during the Deluge. Erik Dahlbergh's depictions of Crown army camps from the 1650s are identical. (Contemporary painting, L'viv Historical Museum)

salute (three cannon shots in rapid succession) as a recognition signal, and although this salute was chosen for religious and political reasons, it must have felt familiar to Grodzicki. The most notable Lithuanian artilleryman was Fryderyk Getkant (1600–1666; Lithuanian: Frydrichas Gedkantas), the deputy Crown General of Artillery. Getkant was an experienced military cartographer, artilleryman, and fortification officer. Like Grodzicki, he had fought the Swedes in Prussia in the late 1620s. Getkant was also innovative, devising new methods for the firing of grenades, and may have invented the so-called earth mortar, a mortar dug into the ground for increased stability.[36]

Despite the advances in musket and artillery technology, many obsolete or unusual weapons remained in the Commonwealth armouries. Among seventeenth-century matchlock muskets retrieved from such armouries, one which survived into the present has an attached forked, A-shaped rest of the style traditionally used in Inner Asia. Currently in the L'viv Historical Museum, the musket either derives from the Mongol Kalmyks (more of whom below), who at the time fought for Muscovy, or is a remnant of an older tradition of guns which reached the region from the east at an earlier time.

---

[36] Nowak, 'Det polska kronartilleriet', [illegible] ground was later perfected by Muscovite artillerymen. Fredholm von Essen, *Muscovy's Soldiers*, pp.116–17.

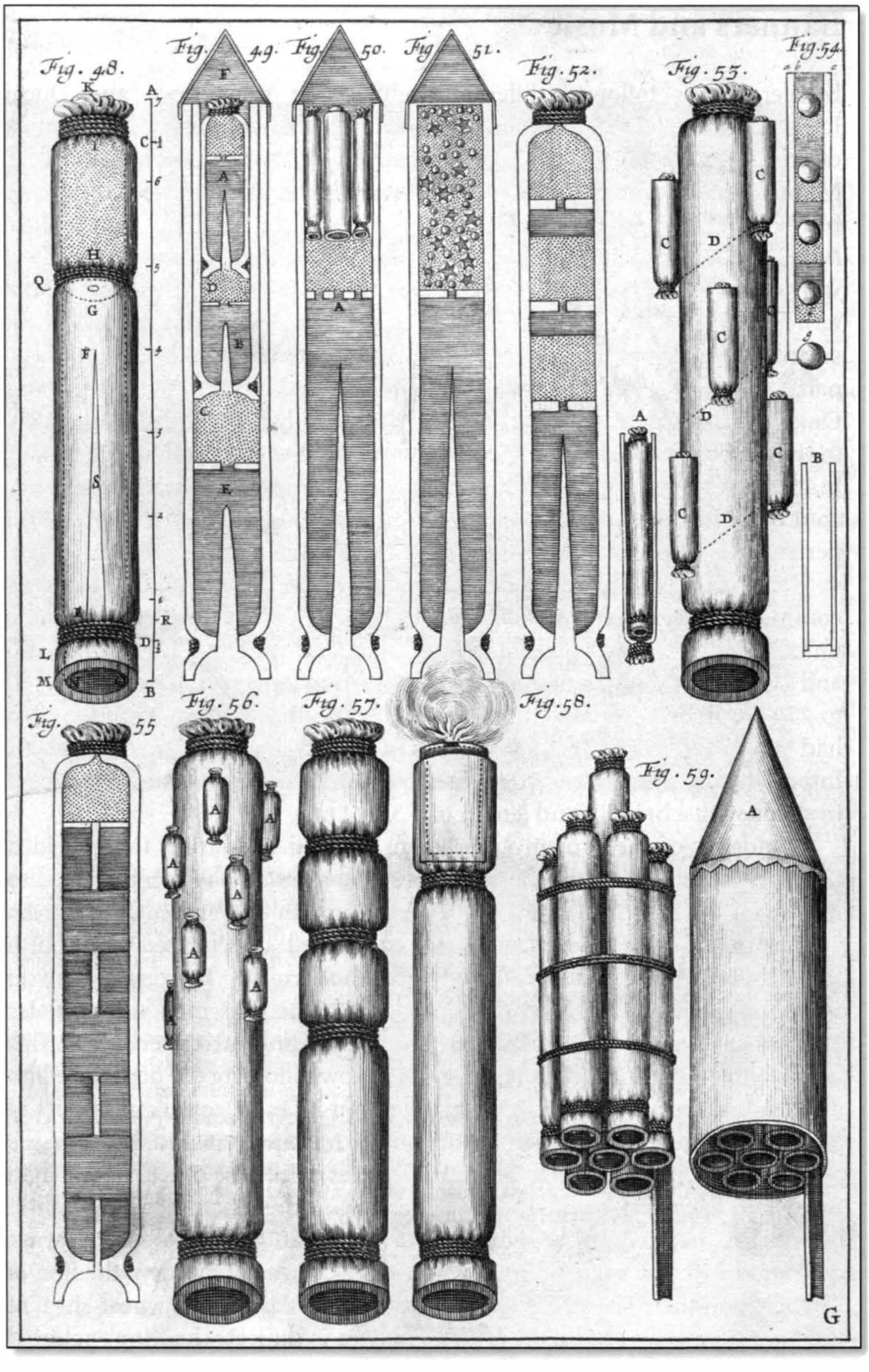


Fig. 48.
K
A
C
I
H
Q
G
F
S
E
R
D
L
M
B
Fig. 49.
F
A
D
E
C
E
Fig. 50.
A
Fig. 51.
Fig. 52.
Fig. 53.
C
D
A
Fig. 54.
B
Fig. 55
Fig. 56.
A
Fig. 57.
Fig. 58.
Fig. 59.
A
G

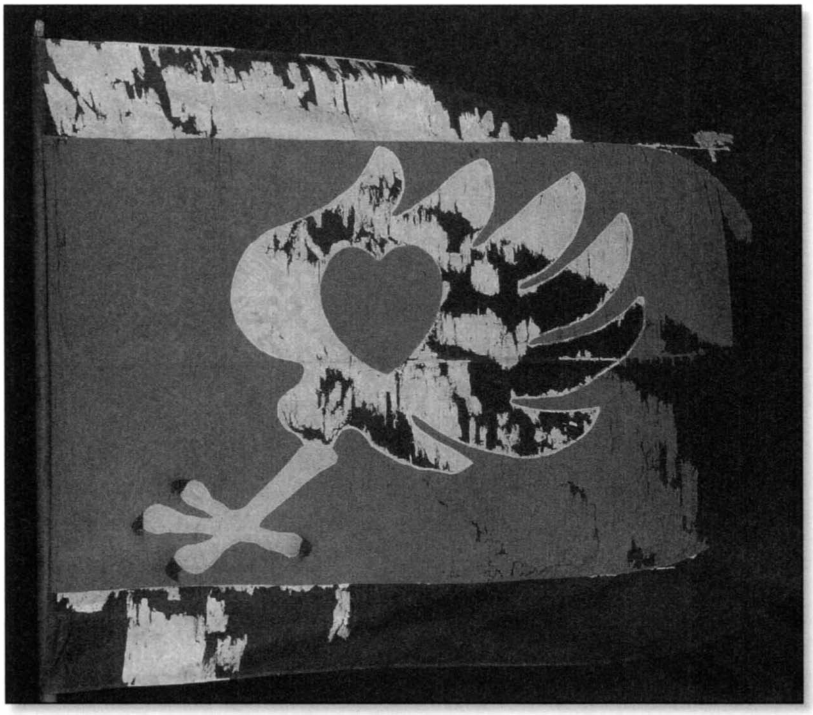
Although still primarily used for entertainment purposes, rocketry had found a niche in military technology, particularly for illumination and signalling. One of the pioneers in this field was the Lithuanian artillery and engineering officer Kazimierz Siemienowicz (c. 1600-c. 1651; Lithuanian: Kazimieras Simonavičius). Experiments were also made in biological warfare, through the remnants of diseased animals, and with poison gas, the use of which Siemienowicz objected to. (Kazimierz Siemienowicz, *Artis magnae artilleriae pars prima*, 1650)

Banners and Music

Banner motifs followed different traditions in the Crown and Ducal Lithuanian armies. A common symbol of Crown banners was the silver or white eagle on a red field, or alternatively, a white cross on a red field. Meanwhile, a common symbol of Lithuanian banners was what in later history became known as the 'chase' or 'pursuit' (Lithuanian: *Vytis*; Polish: *Pogoń*) motif, which consisted of a mounted knight – the 'pursuer' or 'warrior-hero' (Lithuanian: *Vytis*; Russian: *Vityaz'*) who gave rise to the term. The knight, often depicted on a red field, was invariably depicted with sword raised against his enemies and with a double cross (a variant of the patriarchal cross) emblazoned on his shield. Based on the seal of the Grand Duke of Lithuania Algirdas (r. 1345–1377), who had expanded his borders to the Black Sea, there is some evidence that by then the symbol was already in fairly common use. In addition, banners with religious motifs were very common, including but not limited to the Virgin Mary and the Holy Child, perhaps standing on a crescent moon with a sunburst as background.

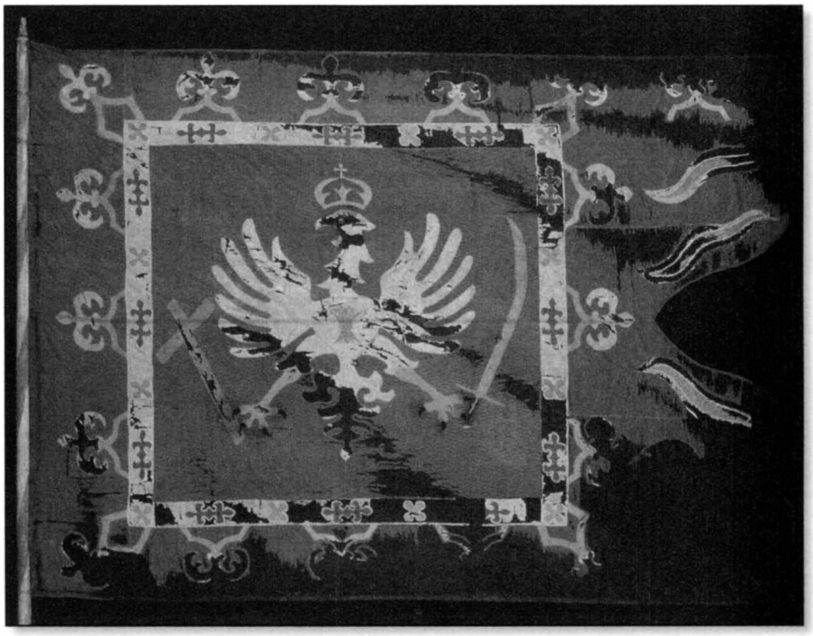
Standards of the national autorament were often straightforward in style, commonly only displaying a suitable device on a plain field. Cossack-style units generally carried square, unfringed standards roughly 125 cm in breadth and 115 cm in length, while hussar units carried larger standards, some 180 to 250 cm in breadth and 250 to 350 cm in length, which in addition often had two to three tails. Infantry colours in the national autorament followed Imperial practices with regard to size and patterns. They were usually square in shape with a breadth and length of 1.5 to 2 m.

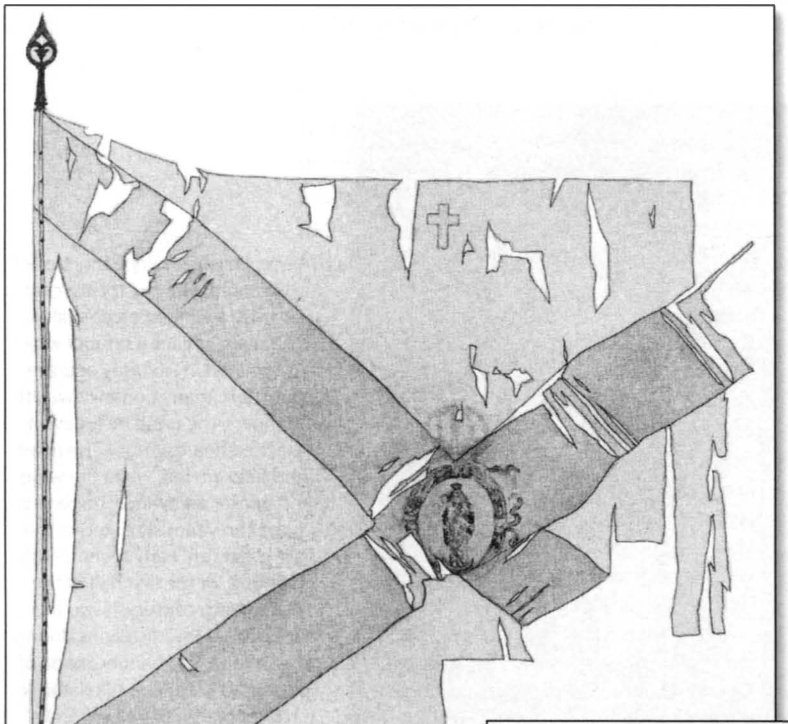
Standards of the foreign autorament differed little from those fielded by other Continental-style units. The several standards which belonged to the Royal Guard exemplify this development. In November 1655, seven companies of King John Casimir's Royal Guard surrendered to Swedish units under Wenzel Sadowski at Bautz (modern-day Będzin). Sadowski was a Bohemian Protestant who primarily enlisted his men among Poles. Somewhat later, two additional companies of the unit surrendered, too. This was in agreement with the surrender of Cracow following the departure into exile of King John Casimir. As a result, seven infantry company colours of the Royal Guard unit remain in the Army Museum, Stockholm. The life company is white, following Swedish practices, while the others have a light blue field. Each is decorated with a yellow St Andrew's cross, on the centre of which is painted, on the outer side, King John Casimir's coat of arms: quartered with the eagle of Poland, the three crowns of Sweden, the lion of Sweden, and the chase of Lithuania, with, in escutcheon, the wheat-sheaf of the Vasa superimposed on the arms of Austria to indicate the King's paternal and maternal side. The coat of arms is surrounded by a laurel wreath and the painted letters I, C, R, P, E, and S, signifying Iohannes Casimirus Rex Poloniae et Sueciae ('John Casimir King of Poland and Sweden'). Above the coat of arms is a small yellow cross of St. George with the letters I, N, R, and I, signifying Iesus Nazarenus Rex Iudaeorum ('Jesus from Nazareth King of the Jews'). The inner side of the colour is identical, except for the Virgin



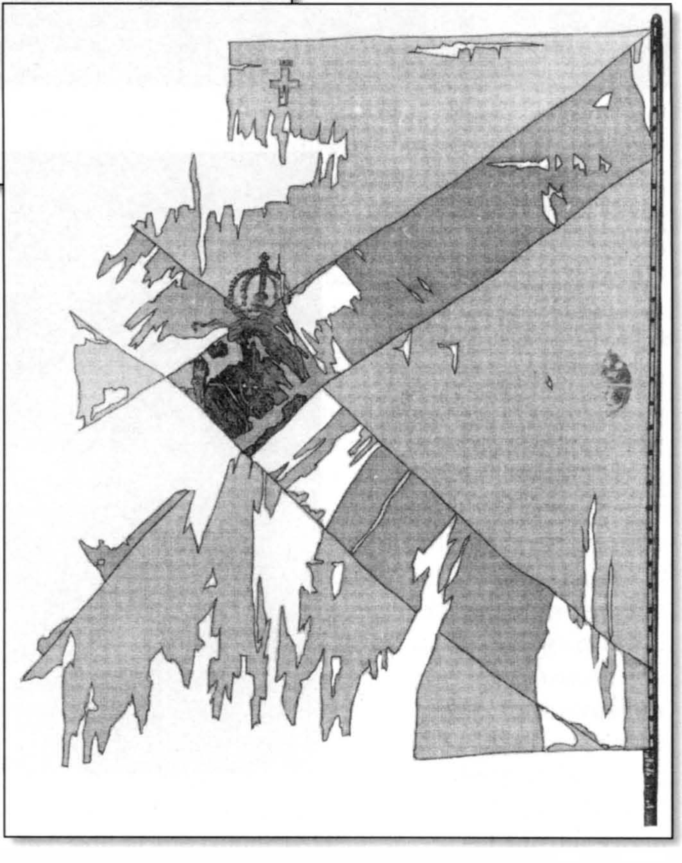
Above: Polish cavalry banner often associated with the *topacz* coat of arms, a winged eagle's talon, which was a military symbol which originated in Hungary and the south. Like many Commonwealth banners, the motif includes an attached heart symbol. The heart and field are red, while the wing and border are white. The banner has been variously dated to the late sixteenth, early seventeenth century, or the first half of the seventeenth century. It was likely captured by Swedish units during the Deluge. The banner, made of patterned European silk damask, has a breadth of 148 cm and a length of 240 cm. (Army Museum, Stockholm, ST 29:123)

Right: Polish cavalry banner with a white eagle as the main motif, on a red field. Made of silk, with a breadth of 160 cm and a length of 176–313 cm. The yellow wheat-sheaf on the eagle's breast dates the banner to the reign of the Polish Vasa dynasty. Believed possibly to have been taken at Cracow in 1655, the banner is of an early type and may accordingly have been significantly older, perhaps dating to the late sixteenth century. (Army Museum, Stockholm, ST 28:58)

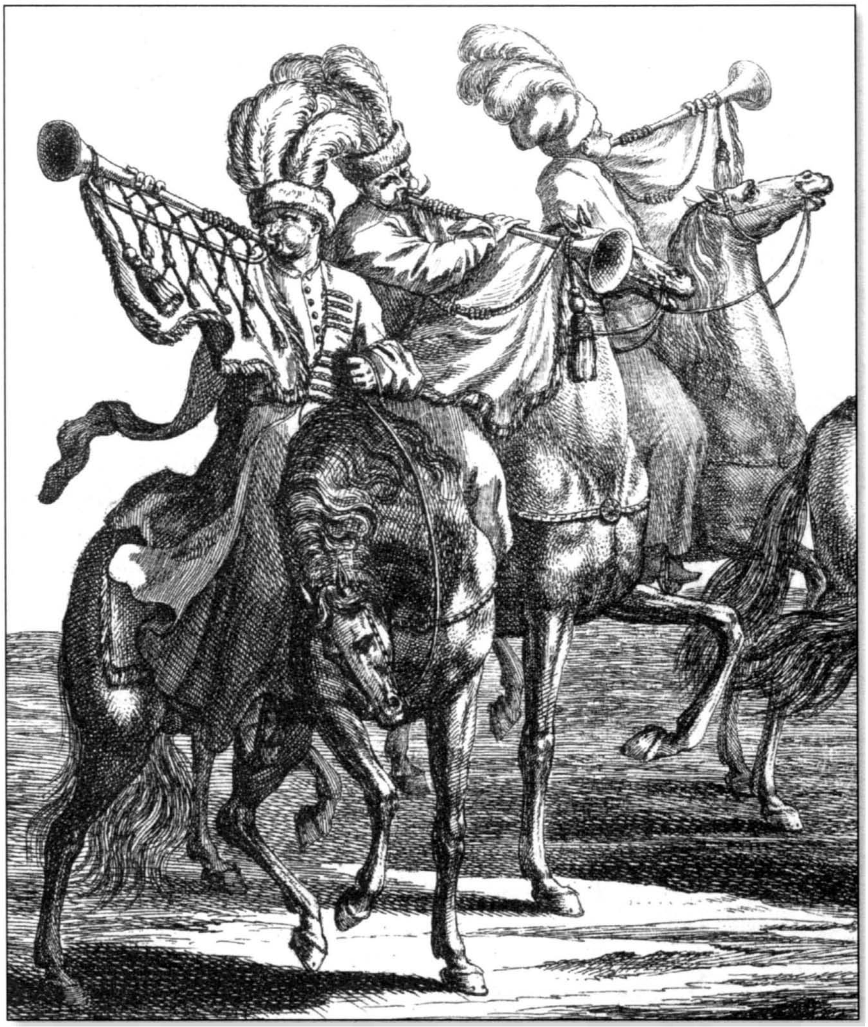




Left: Company colour of King John Casimir's Royal Guard. Taken by Swedish units under Wenzel Sadowski at Bautz, 1655. (J. Jonsson, Army Museum, Stockholm; ST 28:34)



Right: Company colour of King John Casimir's Royal Guard. Taken by Swedish units under Wenzel Sadowski at Bautz, 1655. (J. Jonsson, Army Museum, Stockholm; ST 28:36)



Cavalry trumpeters. (David Klöcker Ehrenstrahl, *Certamen equestre*, 1672)

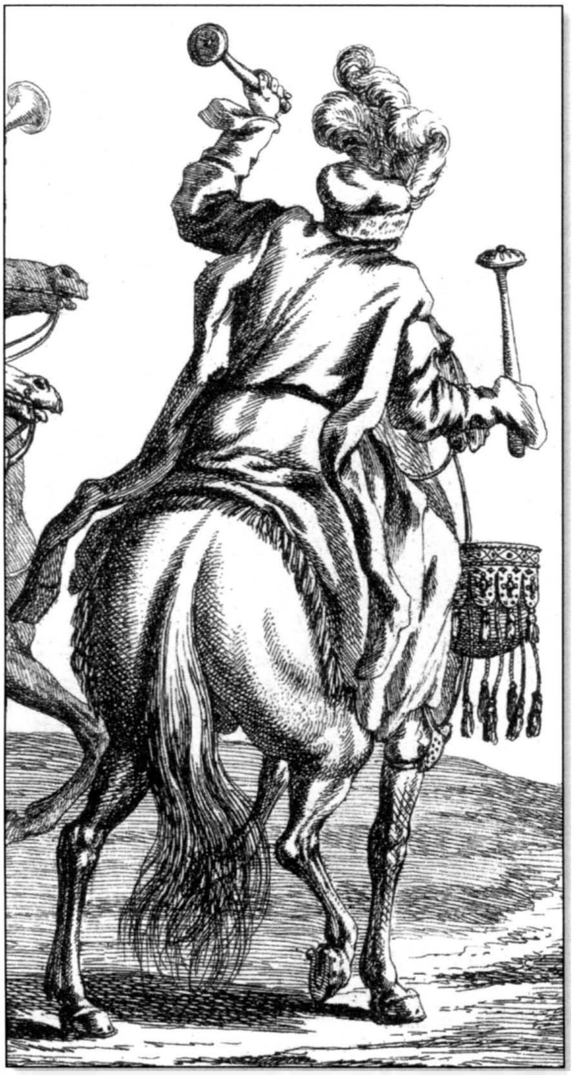
Mary and the Holy Child instead of the coat of arms. The colours are about 173 to 181 cm in breadth and 190 to 218 cm in length.[37]

The cornets of the German Cavalry Regiment of the Royal Guard displayed the same Swedish characteristics as the colours of the foot units. The life company had a cornet with a white field, while the other companies all seem to have flown cornets with blue fields. Dimensions were approximately 54x54 cm. Like the colours of the Royal Guard infantry units, those of the German Cavalry Regiment of the Royal Guard which survived into the present remain in the Army Museum, Stockholm.

Based on these examples, it seems likely that many, or most, units within the foreign autorament followed Swedish practices with regard to colours, cornets, and guidons, including that the life company of the unit flew a standard with a white field.

---

[37] Arne Danielsson, 'Polska baner och gardesfanor i Statens Trofésamling', *Meddelande 41–42 Armémuseum 1980–1982* (Stockholm: Armémuseum, 1984), pp.35–51, on pp.43–6.



Cavalry kettle-drummer. (David Klöcker Ehrenstrahl, *Certamen equestre*, 1672)

The burgher militia regiments of the Danzig Army employed another tradition of selecting motifs for their colours. As noted, the Danzig Army included five burgher militia regiments of German-style infantry, each of perhaps 12 companies. Although commonly known by their geographical origin, the regiments were sometimes described after their colours, since all companies within a regiment used colours with a field of the same colour. The regiments were accordingly named the Blue, White, Red, Orange, and Mixed, each with colours with the fields of the appropriate colour. Unsurprisingly, the companies of the Mixed regiment carried colours with fields of different colours. Dimensions seem to have been approximately 173 cm in breadth and 200 cm in length.[38]

Colours and standards, but also musical instruments, were regarded as important trophies, so they were eagerly captured in battle. It was deemed a disgrace to lose a standard, since a captured standard was a sure sign of defeat. However, the loss of standards and musical instruments also made it difficult to gather and reorganise the survivors of a unit, since standards and music was important means of leading a military unit. As for music, Commonwealth armies primarily employed a variety of trumpets and kettle-drums.

Logistics

The Commonwealth had no centralised supply system. Nor was it possible to establish one, since the Crown Army and the Grand Ducal Army constituted separate military establishments each with its sources of funding. As noted, nobles and other cavalry were supposed to provide their own supplies, so each man brought individual baggage, while the units of the foreign autorament maintained regimental supply trains, provided for by the state. Most units included an excessive number of servants, camp followers, and wagons. Because of the lingering Eastern traditions of steppe warriors, traditional cavalry (primarily Tatars but sometimes also Poles and Lithuanians) might still choose to operate in what was called *komunik* (without infantry support and wagons) when speed was of the essence. If so, they supplied themselves by plunder and contributions from the territories which they passed through. The appearance of such a cavalry army was probably no more welcome than a foreign invasion, since either would live off the land.

---

[38] Brzezinski, *Polish Armies 2*, pp.46–7.

However, it was far more common to use a wagon train (*tabor*, a designation in common use at the time which probably originated during the fifteenth-century Hussite uprising, since the Hussites invoked the image of the Biblical Mt. Tabor). The wagons of the supply train were occasionally positioned as a defensive line to shield the army from raiding enemy horsemen. Usually, the wagons were not specially modified for this purpose, except that they might be manned by armed men and even small ordnance such as wall guns. However, a wagon train of this type could advance slowly together with the units it shielded. Cossacks and Muscovites habitually used wagon trains on the Pontic steppe against Crimean Tatar incursions, and Commonwealth units were no strangers to such tactics. In fact, the wagon train tactics was of considerable antiquity and common throughout Eurasia. On the other side of the continent, Chinese and Manchus used similar tactics.

Although both the term *tabor* and the details of how a wagon train was employed as a defensive line is best known from the fifteenth-century Hussite insurgency, it seems quite likely that the Hussites learnt to use the tactics while in Polish service. Among the Hussites, each wagon was drawn by four strong horses. When used for defensive purposes, the horses were unharnessed and the wagons formed up into a square or a circle, with each wagon pole pushed above the wagon ahead, or taken off. The wagons were chained together, and whenever there was time a ditch was dug in front of the carts. However, exits were always left at front and rear to allow for sallies in force. These exits were temporarily blocked with woodwork and chains until they were needed. The horses were kept inside the formation, available for cavalry sorties. The wagons were defended by men with missile weapons and long polearms. In addition, the Hussites 'camped together with their women and children in the open field, with lots of wagons which they had fortified ... The cavalry fought outside the wagon castle, but if hard-pressed, moved back into the castle and fought like from the walls of a beleaguered city. In this way they won many battles and victories.'[39]

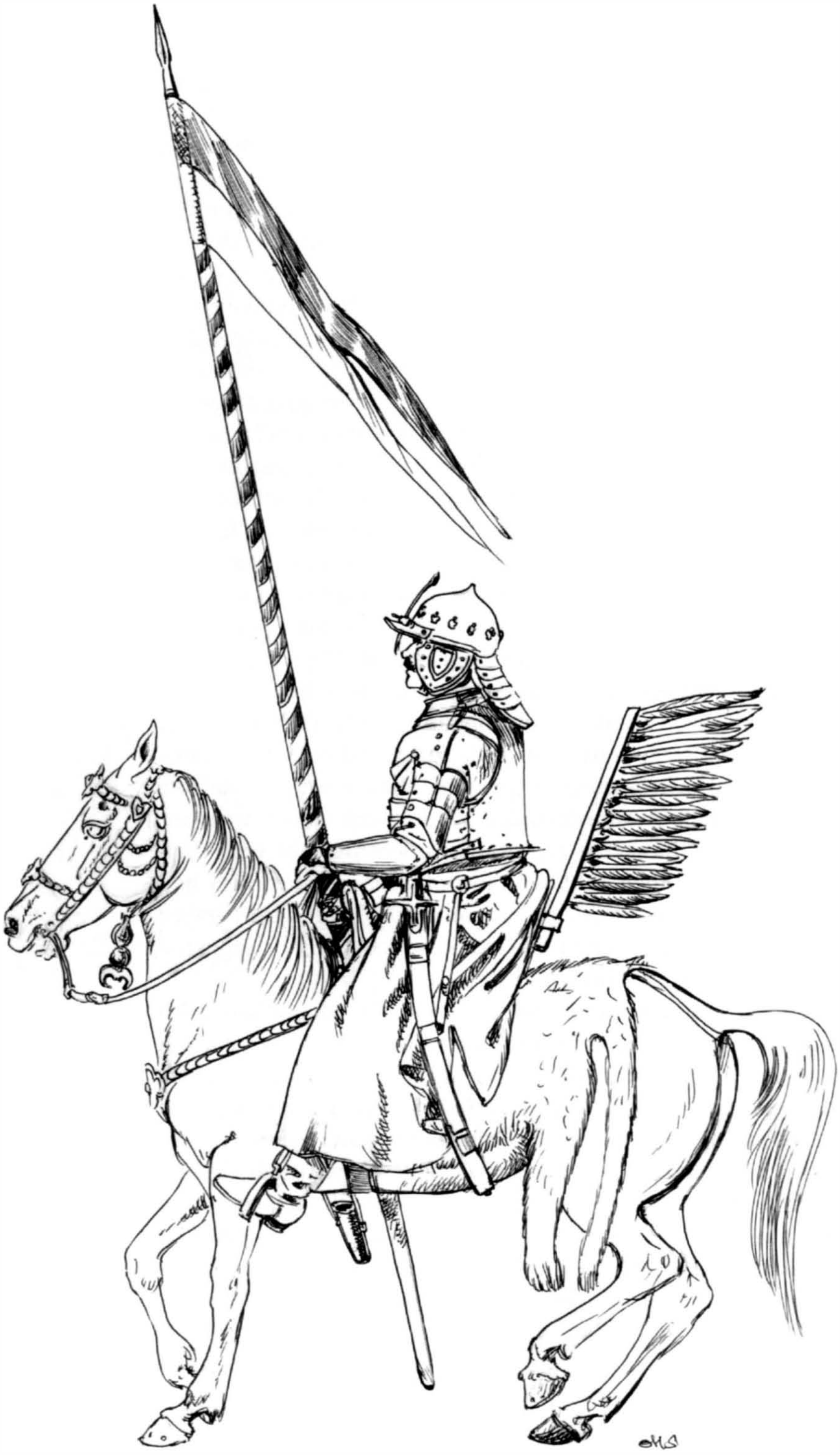
On such occasions, religious hymns and songs would no doubt have been used to raise morale. Before leaving Poland for the journey to Denmark in 1658, the Commonwealth expeditionary force is reported to have sung *O Gloriosa Domina!* in the Polish manner. Likewise, before a battle with the Muscovites in 1660, the Commonwealth army sang the same hymn.[40]

While logistics may have been somewhat less developed than desired, the Commonwealth had excellent engineers. Along the borders, especially in but not limited to Prussia, cities, towns, and fortresses were protected by modern fortifications. Even monasteries such as Jasna Góra often had up-to-date fortifications. While many old cities in the interior, including Warsaw, Cracow, Posen (modern-day Poznań), and Wilno (modern-day Vilnius), still retained their mediaeval walls, engineers were available to improve their

---

[39] H.W. Koch, *Medieval Warfare* (London: Bison Books, 1978), pp.166–7, based on the contemporary witness Aeneas Sylvius (Pius II) who described the Hussite art of war in his *Bohemian History* (ch. 47) as well as his *Commentaries for King Alfonso* (ch. 44).

[40] Brzezinski, *Polish Armies* vol. 1, p.36.



Polish hussar ready for battle. (Illustration by Sergey Shamenkov) fortifications, if funding was made available. Prussian cities and major towns such as Danzig, Elbing, Thorn (modern-day Toruń), and several others were very well protected and fortified, with defences of a quality that had few equals elsewhere in Europe.

Navy

With the exception of a few ships under the control of the city of Danzig, the Commonwealth had no fleet. The modest blue-water fleet which the Commonwealth had attempted to build during the Thirty Years' War had first been transferred to Imperial service, and then been captured by the Swedes. No attempt to rebuild the fleet had been made since then. In August 1659, the idea to establish a Commonwealth fleet of privateers was raised. However, Danzig had no interest in the proposal, which led nowhere. Nonetheless, the small Danzig fleet operated throughout the war, as privateers on the Baltic Sea but also to provide riverine fire support during sieges in Prussia.[41]

Tables

Table 8 (see page 135). Estimated Commonwealth Mobilisation, Summer 1655

Source: Wimmer; 'Armé och finansväsen', pp.65–6

Against the Swedes	
Enlisted Polish cavalry	
– 4 banners of hussars	
– 5 banners of Wallachians	
– Some 65 banners of cossack-style and Tatar cavalry	
Together	6,800 men
Enlisted German cavalry	
– 2 squadrons	245 men
Enlisted dragoons	2,250 men
– 8 regiments	
Enlisted German infantry (primarily guard units)	870 men
Danzig Army (enlisted, primarily infantry)	2,000 men
Noble Levy	32,000 men

---

[41] Podhorodecki, '1659 års fälttåg', pp.306, 310.

Levied infantry (*łanowa*)	4,300 men or more
Enlisted provincial or private formations	3,300 men
In total:	Approximately 52,000 men
Against the Muscovites and Ukrainian Cossacks	
Enlisted Polish cavalry	
– 2 banners of hussars	
– Some 50 banners of cossack-style cavalry, Tatar cavalry, and Wallachians	
Together	4,700 men
Enlisted mounted arquebusiers	180 men
Enlisted dragoons	275 men
Enlisted German infantry	2,900 men
Enlisted Polish infantry	1,330 men
Noble Levy	4,000 men
Levied infantry (*łanowa*)	300 men
Lithuanians	At most 10,000 men, probably less
In total	At most 23,000 men
Grand Total	Possibly 75,000 men

4

The Brandenburg-Prussian Military Establishment

Frederick William, Elector of Brandenburg, was also Duke of Prussia. However, he did not control all of Prussia. Prussia consisted of two domains: Ducal Prussia and Royal Prussia. Both belonged to the Polish Crown but under different circumstances. Ducal Prussia or East Prussia was held as a fief under the Polish Crown by the Elector of Brandenburg, and Royal Prussia was ruled by the King of Poland.

Although Prussia belonged to the Commonwealth, the military forces of Brandenburg-Prussia employed forms of organisation and types of tactics of the Continental model, which since the end of the Thirty Years' War was fundamentally influenced by the Swedish model. However, at the outset of war the Brandenburg army was small and insignificant. In fact, the Brandenburg-Prussian military establishment is far more notable for what it became, and for how it developed immediately after the the wars of the Deluge, than for its composition at the outset of the war. The wars of the Deluge marked the origin of the Prussian army, and of Prussia (together with the hitherto more established Brandenburg) as an independent state of some renown. Without Brandenburg-Prussia's participation in the wars, there would have been neither a Kingdom of Prussia under the House of Hohenzollern, nor a subsequent Prussian army.

Frederick William began the war almost without an army. Nor did his territories have a functioning military establishment from which he could raise one. Following customary practices in Europe at the time, the ruler of Brandenburg did not enjoy absolute power. He had to work with the Estates through parliament to be granted funding for extraordinary expenses, such as those incurred for military operations or the maintenance of a standing military force. Unfortunately for Frederick William, the Estates were usually unwilling to accept any new expenses. In this legal reality, Frederick William's position was distinctly inferior to that of King Charles, who enjoyed widespread support which also manifested itself whenever he called a parliament. To some extent, Frederick William's situation could be compared to that of King John Casimir.

However, Frederick William faced an additional problem. Upon the death of his father he had inherited three widely separated territories. In the west, in the Rhine valley, lay the Duchy of Cleves and the territories of Mark, Minden, and Ravensberg. In the centre, mainly between the Rivers Elbe and Oder, was his principal possession, the Electorate of Brandenburg, but also Halberstadt, Magdeburg, and Eastern Pomerania. To the east, on the Baltic shore and under the suzerainty of the Polish Crown, lay the Duchy of East Prussia. Each of these three territories regarded itself as separate and independent from the whole, each had its own set of Estates, and neither accepted contributing soldiers for the defence of the others. Likewise, neither accepted to cover any monetary expenses incurred by the others, or for the defence of the others. This stance was influenced by regional particularism, but it also was the result of genuine, practical problems. Each of the Elector's territories (except remote Prussia) had been devastated during the Thirty Years' War. This had been largely unavoidable, since small territories of this kind simply lacked negotiating power when a major army chose to march through them. As a result, Frederick William realised early on that his small domain only could compete with the surrounding, major powers, or at least prevent them from marching through and devastating his lands, if he established a formidable army of his own.

However, this took money which the Elector did not yet have. Although Frederick William had gained additional territories through the Peace of Westphalia which in 1648 ended the Thirty Years' War, he had then been forced to disband even his existing, quite modest army. He lacked the personal resources to support an army, and his Estates saw no reason to fund an army when the country was at peace. Frederick William managed to acquire some funding through regional agreements, such as the 1653 Brandenburg Recess between the Elector and the Estates of Brandenburg, in which the nobility, including the landed nobility of the Junker class in Prussia, provided the sovereign with some funds in exchange for affirmation of extensive noble privileges. An Imperial law of 1654 was helpful, too, since it obligated the subjects 'to provide helpful contributions to the manning and maintaining of the necessary fortresses, fortified places, and garrisons'.[1]

As a result, the Brandenburg-Prussian military establishment in the early 1650s is estimated to have consisted of no more than the Elector's personal military escort of the 63-man Life Guard of Horse and the 202-man Life Guard of Foot (*Leibgarde*; divided into one company each from Brandenburg and Prussia), together with a minimum number of men to garrison his more important fortresses.[2] As late as early 1655 Frederick William's army consisted of no more than 30 companies (Table 9 – tables are located at the end of the chapter). This force consisted of 790 men in the East Prussian ports of Pillau and Memel which safeguarded the Baltic Sea trade and accordingly constituted a major source of revenue for the state, 596 in Colberg in Pomerania, 1,352 in Brandenburg itself, and small bodies of soldiers in the fortresses of the other territories. Altogether, the total amounted to no more than 3,907 men, dispersed in garrisons.[3] There were no resources whatsoever for manning a field army. In 1653, Frederick William had to order a third of the garrison infantry to be equipped and retrained with pikes, so that he at least had a minimum number of units which could be converted into a field army. Following the organisational model of the Swedish army, Frederick William aimed for one-third pikemen and two-thirds musketeers.[4]

---

[1] Hans Delbrück, *History of the Art of War*, vol. 4: *The Dawn of Modern Warfare* (Lincoln: University of Nebraska Press, Bison Books, 1990), p.245.

[2] In 1656, the Life Guard of Horse (which consisted of 54 guardsmen and nine officers; in total 63 men) was named the Trabant Guard in imitation of the Swedish Drabant Guard, which itself in the previous century had been established in imitation of similar German guard units. Jany, *Urkundliche Beiträge*, vol. 1, p.115.

Even when it became increasingly obvious that war would break out again, the Estates within the Elector's dispersed territories refused to fund any more than a token military force. In September1654 a Swedish envoy, Count Christoph Carl von Schlippenbach, visited Berlin and suggested an alliance between Brandenburg and Sweden. Moreover, Schlippenbach suggested – apparently on his own initiative – that the Elector swap his Prussian ports of Pillau and Memel for new territories to be taken from the Commonwealth, after King John Casimir had been defeated. While King Charles certainly desired these ports, there is no reason to believe that he wanted his envoy to show his cards to the Elector at this early stage.[5] Moreover, Pillau and Memel were, next to Königsberg (modern-day Kaliningrad), the Elector's two most lucrative trading ports in East Prussia. As a result, Frederick William turned down the proposition.

Frederick William's next action was to send his able chief of artillery (*Feldzeugmeister*), General Otto Christoph von Sparr (1599 or 1605–1668), to Ducal Prussia to reinforce the existing fortifications there. Sparr, an Imperial officer in the Thirty Years' War, had entered the service of Brandenburg in 1649 as major general. In 1651, he was appointed chief of artillery. He could be counted on to defend Prussia against Swedish aggression.

Simultaneously, Frederick William began to raise a military force from scratch. At this point, he had no illusions about his chances of recruiting a permanent army of the Swedish type. Instead, he envisaged the customary enlisted force to be retained only while his territory was at risk and only at the sufferance of the Estates.[6] The problem was, there were no funds for

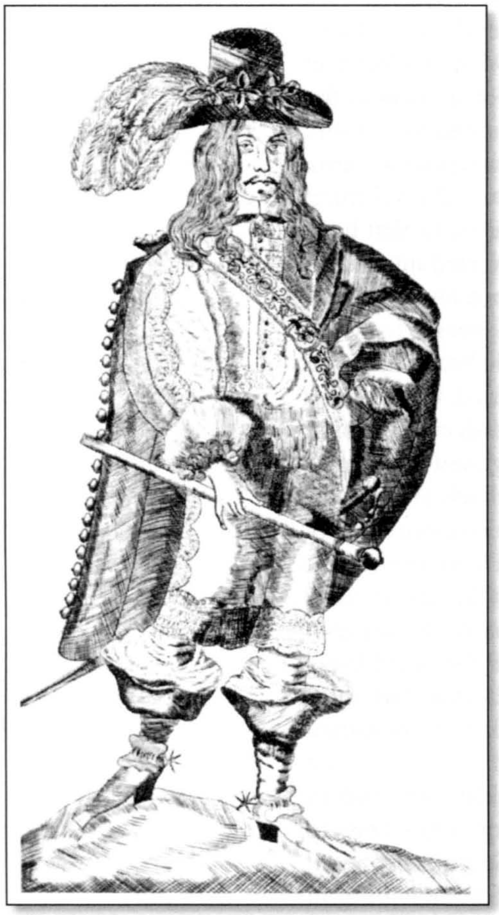
---

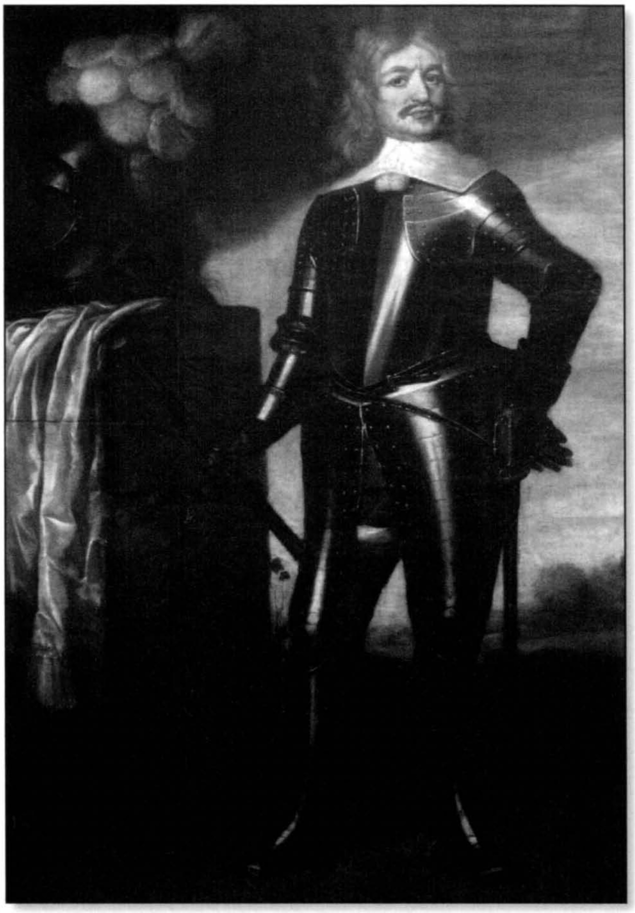
[3] Sidney B. Fay, 'The Beginnings of the Standing Army in Prussia', *American Historical Review* 22: 4 (1917), pp.763–777, on p.768. Fay also lists the fundamental sources to the origin of the Brandenburg army, notably Jany, *Urkundliche Beiträge* 1, pp.84–114, which Fay cites for these figures. Jany does give similar figures, but he also notes that the Elector's army was significantly reduced in numbers in 1653, that is, between the date of these data and the raising of a new army for the wars of the Deluge.

[4] Delbrück, *History of the Art of War*, vol. 4, p.269.

[5] Schlippenbach exceeded his authority in other diplomatic negotiations as well, including when he in February 1655 attempted to interest Bavaria in an attempt to wrestle the Imperial crown from the Habsburgs. Hearing rumours about Schlippenbach's various diplomatic initiatives, King Charles wrote to the envoy, reminding him to stick to his instructions. However, it seems that King Charles never learnt the full details of Schlippenbach's transgressions, so the latter suffered no serious censure.

[6] Fay, 'Beginnings', p.768; citing the Elector's orders for a provisional 'militia in waiting', 20 October 1654.





Left: Christoph Carl von Schlippenbach.

Right: Otto Christoph von Sparr.

what was needed. In theory, the nobles – technically, his feudal vassals – owed him military service (*Rossdienst*) in times of war, in the same manner that the Swedish Retinue of Nobles and the Commonwealth's Levy of the Nobility owed such service to their respective suzerains. However, most of the Elector's vassals were notably unfit for military service. No matter, feudal service was still owing to the Elector, and he accordingly exacted monetary payments in lieu of it, and then used the money to enlist professional soldiers. Frederick William knew that if Sweden invaded the Commonwealth, much of the fighting would take place in Prussia.

Having taken those measures which he could, Frederick William turned to the Brandenburg Estates, requesting money sufficient to enlist, equip, and maintain 3,000 new infantry. With the growing risk of war, the Estates were slightly less hostile to the proposal than in the past, and in spring 1655 consented to fund the enlistment of two-thirds of the army that the Elector had requested.[7]

---

[7] Bernhard Erdmannsdörffer (ed.), *Urkunden und Actenstücke zur Geschichte des Kurfürsten Friedrich Wilhelm von Brandenburg*, vol. 10, pp.315-16. The Estates had consented by 21 February 1655 (O.S.) but it took all spring to realise the Elector's goal.

Meanwhile, Frederick William in April 1655 established Brandenburg's first modern ministry of war, known as the General War Office (*Generalkriegskommissariat*), with authority over all the military forces in all the Elector's territories.[8] Headed by a *Generalkriegskommissar*, the department exercised some of the functions of a general staff, of a quartermaster-general, and of a treasury department.[9]

War has a way of focusing parliamentary attention. In July, as Swedish forces moved into the Commonwealth, Frederick William finally compelled the Estates to grant funding for raising 3,000 additional men, citing necessity for this extraordinary measure. But far more was needed, in funding and in territorial co-operation. The military preparations of all neighbours compelled Brandenburg to follow their example. In words which foreshadowed the Elector's future attitude towards the Estates in military matters, Frederick William on 12 July 1655 declared:

> And since this army is for the benefit not simply of one, but of all our lands, we deem it proper that the cost and maintenance of the troops must be borne by all territories, and that the soldiery (German: *Soldatesque*) shall be assigned amongst them proportionally.[10]

However, even faced with imminent war the Estates refused to grant these additional powers. Frederick William therefore took the extreme step of ruling by decree and military execution, without the consent of the Estates and against their will. With such means, he collected a significant extraordinary land tax to finance his military needs. The funding thus gained was used to enlist skilled soldiers, which finally enabled the Elector to raise the required army.[11]

By mid 1655 Frederick William had enlisted a corps of some 8,000 men, which he in September moved into Ducal Prussia. He united it with some 5,000 newly enlisted units in Prussia and what he hoped to be 6,000 to 7,000 men militia under Lieutenant General Georg Friedrich von Waldeck (1620–1692), a veteran of the Thirty Years' War who commanded the army in

---

[8] This office was established on 8 April 1655 (N.S.). Although it eventually acquired a reputation for professionalism due to its role as the origin of the (much later) Prussian General Staff, the *Generalkriegskommissariat* did not have broader duties, nor employ more up-to-date or efficient methods, than, say, Muscovy's Military Deployments Chancellery (*Razryadnyy prikaz*), established already in the fifteenth century, or the Swedish War Council or War Court (*Krigsrådet*, *Krigsrätten*), formally established in 1630 but deriving from organisational forms introduced in the sixteenth century. Generally speaking, all three handled tasks such as appointments to commands, maintenance of provincial garrisons and defences, supervision of mobilisation and recruitment, management of quartermaster functions and military intelligence, the administration of compensation entitlements, and at least in the broad sense, the planning of operations.

[9] *Generalkriegskommissar* Klaus Ernst von Platen (1612–1669), the head of this department, at first was merely a member of the Privy Council assigned to look after military matters. However, he soon built up a structure of clerks and administrative boards which over time grew into a centralised military management structure, which among other tasks set standards for arms and equipment, ordered uniforms and other gear, and collected the taxes for covering these costs. Fay, 'Beginnings', p.777.

[10] *Urkunden und Actenstücke*, vol. 10, p.316.

[11] Fay, 'Beginnings', p.771.

Prussia until Sparr later in the year received command of all Brandenburg-Prussian troops.[12] This should have given Frederick William 20,000 men, but he soon found out that this target was not actually achieved. By the end of 1655, the Brandenburg army in Prussia in reality had only reached, at most,17,000 men.[13] However, Frederick William raised his military strength further, and as rapidly as he could. By mid 1656, when he joined forces with Sweden, his army in Prussia alone had acquired a strength of almost 19,000 men (Table 10). This army included 7,000 cavalry, 3,300 dragoons, 8,700 foot, and some artillery. Its total nominal strength was 22,000, but this included *passe-volants*, that is, empty posts, and various other deficits so the real total was lower.[14]

The real baptism of fire for Frederick William's army was his first great military victory, together with Swedish King Charles, in the three-day battle of Warsaw on 28–30 July 1656. In this battle, for the first time, units from Brandenburg, Cleves, and Prussia fought side by side and for a common purpose. As the war progressed, Frederick William took increasingly absolute powers so that he could raise military strength to new heights. By early 1657 his army in Prussia alone consisted of almost 21,000 men (Table 11). This was the largest size the Brandenburg army in Prussia reached during the conflict, before units were moved to Denmark and to support an invasion of Swedish Pomerania.

With the departure of a major share of the Brandenburg army from Prussia in 1658, with the ultimate intention to assist Denmark, the numbers available in Prussia shrank significantly (Table 12). Even so, we should acknowledge that the information on the Brandenburg army presented in these tables may not give the full or complete picture. New units were enlisted throughout the campaigns, many never reached their establishment strength, it was common for companies to transfer from one regiment to another, and there were frequent changes of commanding officers. As a result, the reality was certainly somewhat murkier than presented here.

Post-War Changes

Frederick William saw what was needed to defend his territories, but when war broke out, he had no long-term plan to build a standing army. He also had no blueprint for how to proceed. Instead, the Elector took such opportunities which presented itself. When Frederick William, citing necessity, bypassed the Estates and instead raised the necessary funds by decree and military execution, he changed the traditional balance of power between Elector and Estates in his favour. After the war with Sweden was resolved by the

---

[12] Incidentally, Georg Friedrich von Waldeck and King Charles of Sweden knew each other because they had studied together in Paris during the winter of 1639–1640.

[13] Curt Jany, *Urkundliche Beiträge*, vol. 7, p.5; Curt Jany, *Geschichte der Königlich Preußischen Armee bis zum Jahre 1807*, vol. 1 (Berlin: Karl Siegismund, 1928), pp.109–19.

[14] Jany, *Geschichte*, vol. 1, pp.121–2.

1660 Treaty of Oliva, Frederick William refused to give up his new powers. Instead, he wrote: 'I have become convinced that I owe the preservation of my position and my territory to God, and next to God, to my army.'[15]

Although the Elector nonetheless had to disband more than half his forces after the wars ended, and all artillery horses, he still retained a significant force of some 12,000 men (680 cavalry, 700 dragoons, and 10,220 infantry; the figures did not include officers, staff units, and artillerymen so in reality the army was yet stronger).[16] Of these, 5,200 (including all remaining artillerymen) were retained in garrisons, which was a greater number than before the war, while the rest constituted a permanent field army.[17] This was a first for Brandenburg, which previously had not had any standing military force. Frederick William explicitly insisted on a force of standing men, of the type known as a *miles perpetuus* ('perpetual soldier') as in the Swedish model.[18] Moreover, even though Frederick William had to reduce the number of officers, he did not do so proportionally with the rest of the army. Instead of dismissing a major share of the officers, he retained them in his service by paying them 'waiting money' (*Wartegeld*). The supernumerary officers had no duties in peacetime. However, if war broke out, they were bound by the terms of the agreement that provided their 'waiting money' to be ready to enlist new regiments or to take command of old ones, according to the Elector's orders. Thus, Frederick William secured for himself an adequate number of experienced officers without the burden, in times of peace, of having to pay for a correspondingly large number of common soldiers.

By these means, Frederick William created Brandenburg-Prussia's first ever standing army. All units were enlisted. There were no conscripted units, so the Brandenburg-Prussian army's strength did not depend on the available population. Frederick William established the regiments and selected their colonels, who might derive from the traditional Brandenburger and Prussian nobility or be foreign officers in his service. The colonels then recruited the other regimental officers and enlisted the men, but not quite in the customary manner. An unusual feature of the Brandenburg-Prussian enlistment procedure was that the enlistment of peasants and artisans was forbidden, so all enlisted men were found among those who already had experience as soldiers. Moreover, all enlistment took place in the name of the Elector, not the colonel who raised the regiment. Frederick William also introduced a system of military justice that was far more humane than was common in his age, with the beating of the men by their officers and punishments such as running the gauntlet proscribed. Moreover, he established a cadet institution for the training of future officers. As a result, Frederick William, or the Great Elector as he soon would become known, emerged from the war as the head of a thoroughly professional standing army. Whatever Frederick William may have intended, the army was not as firmly linked to the state as, say, the

---

[15] Fay, 'Beginnings', p.772.

[16] Jany, *Geschichte*, vol. 1, pp.195, 199.

[17] Fay, 'Beginnings', pp.773.

[18] Delbrück, *History of the Art of War*, vol. 4, p.245.

Swedish army. Nonetheless, it was a standing army composed of well-disciplined and well-trained soldiers in the direct service and control of the sovereign. Being an army of paid professionals, it was necessarily limited in numbers by the revenues available for its support, and was for this reason relatively small in comparison with the total population.

In fact, Frederick William did not quite trust the old Brandenburg-Prussian nobility, so he employed an experienced officer, Georg von Derfflinger (1606–1695), as his commanding general. Derfflinger was an Austrian of non-noble origin, being the son of either a peasant or a tailor. During the Thirty Years' War, he had been a colonel and ultimately a general in Swedish service. Entering the service of the Elector in 1654 and remaining on active service until 1690, he trained and led the army so is best described as the professional founder of the Brandenburg-Prussian army.[19]

Organisation and Tactical Doctrines

The Brandenburg-Prussian army employed the Continental model of organisation, which was based on regiments of horse and foot enlisted by colonels who in most cases also commanded their men in battle. The one significant departure from this pattern was Prussia, where the Elector could also call out a territorial defence force (German: *Landmiliz*) of levies. Some served on horse, while others served as infantry. Known as *Wibranzen* or *Vybranzen*, a Slavic word which derived from Polish *wybraniecka* ('chosen' which in this case meant 'conscripted'), these soldiers were little different from the equivalent Polish levies. Unimpressed by this system, in 1655 Frederick William reorganised and combined the existing territorial defence companies as regular cavalry, dragoon, and infantry regiments.

The cavalry company had an establishment strength of 114 men, that is, essentially the same as in a Swedish cavalry company. Each cavalry company nominally consisted of 100 men (16 non-commissioned officers of the rank *Gefreiter* and 84 common soldiers) and 14 under-officers and officers (*passe-volant* positions not counted).[20] In reality, many companies failed to reach establishment strength. Under normal conditions, two full companies or three to four weak companies formed a squadron of some 200 cavalrymen, who deployed for battle in three lines in the Swedish manner.

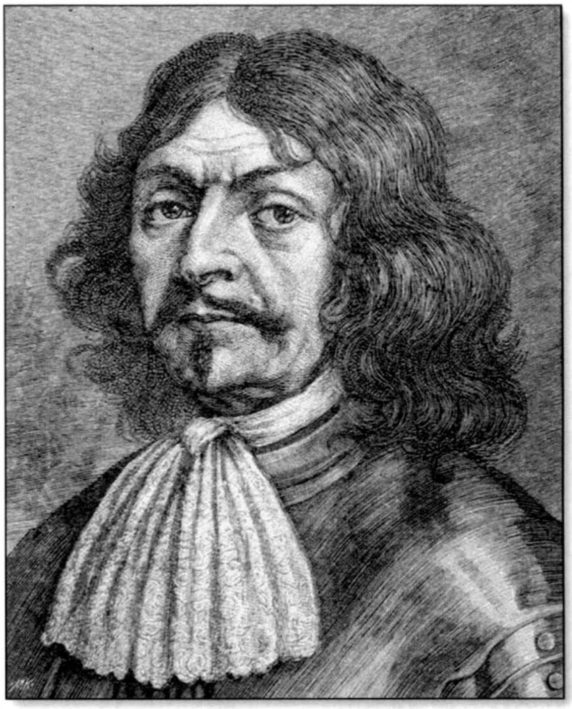
A dragoon company's establishment strength was 115 men. In similarity to the cavalry company, each dragoon company nominally consisted of 100 men (16 non-commissioned officers of the rank *Gefreiter* and 84 common soldiers) but 15 under-officers and officers (*passe-volant* positions not counted).[21] Dragoon companies tended to be attached to cavalry regiments in the Swedish manner, to increase the capacity for defensive firepower.

---

[19] While Field Marshal General Sparr, a Brandenburg noble, remained in service after the Deluge, from 1663 he commanded Brandenburg's contingent in the war against the Ottoman Empire.

[20] Sławomir Augusiewicz, 'Skład i liczebność stałej armii w Prusach Książęcych w latach 1656–1660', *Komunikaty Mazursko-Warmińskie* 243 (1/2004), pp.27–47, on p.30.

[21] *Ibid.*, p.30.



Georg von Derfflinger.

An infantry company had an establishment strength of 118 men. Each infantry company consisted of 100 men (16 non-commissioned officers of the rank *Gefreiter* and 84 common soldiers) and 18 under-officers and officers (*passe-volant* positions not counted).[22] The infantry company's establishment strength also included six artillerymen, and each regiment brought its own integral regimental artillery of the Swedish model. However, the establishment strength was smaller than in the corresponding Swedish regiments (although we have seen that Swedish regiments quickly fell far below establishment strength as the campaign progressed). Enlisted Brandenburg infantry regiments contained two-thirds musketeers and one-third pikemen, just like the Swedish regiments. In reality, many had fewer pikemen than prescribed. Moreover, the regiments formed by *Wibranzen* (levies) seem to have consisted of musketeers only. Each regiment nominally formed two battalions, but as with the cavalry, often several weak units were combined to form a battalion.

Since Brandenburg regiments were only seldom complete, cavalry and infantry regiments tended to vary in strength from three to 12 companies. Dragoon regiments were yet smaller and, in any case, seldom deployed together.

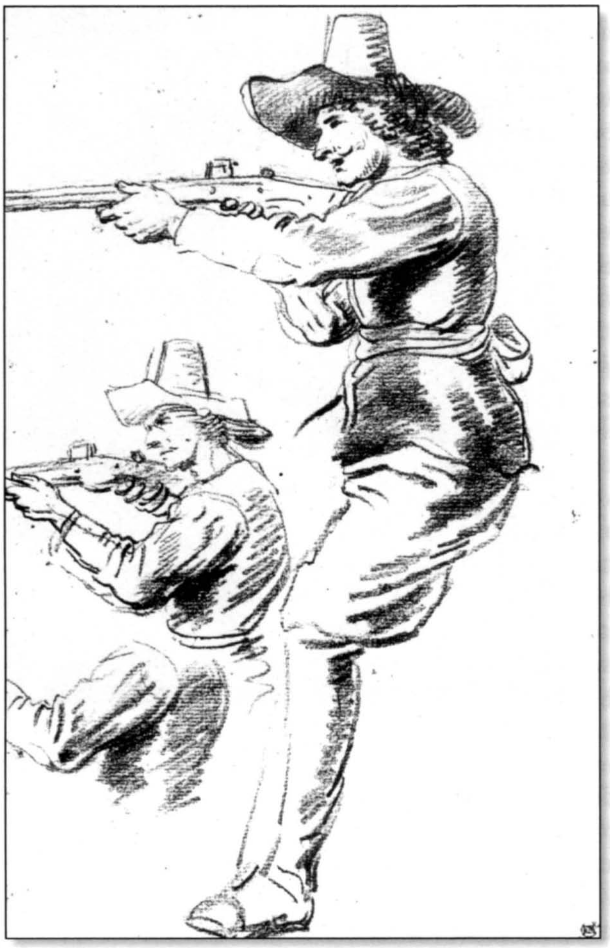
When the wars began, the Brandenburg artillery was, like the Swedish artillery, distributed among the fortified towns. At the outbreak of war, the Elector formed a field artillery train out of the available cannons. Most field artillery was light, primarily consisting of regimental cannons, introduced in imitation of the Swedish model of the Thirty Years' War. They were fewer in number than in the Swedish army, however, and mostly distributed about three per infantry regiment. Heavier cannons were deployed in artillery batteries.

In 1655, when the Elector sent field units from Brandenburg to Prussia, he also sent 34 cannons and three mortars. In 1656, the Brandenburg artillery establishment consisted of 109 artillerymen, specialists, and officers, including one colonel, one lieutenant colonel, one major, two captains, one lieutenant, one master miner, and several others. To this were added numerous support personnel, ranging from craftsmen and horse drivers for the artillery train to general labourers.[23]

---

[22] *Ibid.*, p.30.

[23] For further details on the Brandenburg army, see Jany, *Urkundliche Beiträge*, vol. 7, pp.35–9 (cavalry), pp.46–8 (dragoons), pp.5–11 (infantry), pp.55–9 (artillery), and pp.65–73 (strength). For regimental histories, see Jany, *Urkundliche Beiträge*, vol. 8, pp.112–21 (cavalry), pp.129–33 (dragoons), and pp.92–104 (infantry).



Soldiers firing matchlock muskets, c. 1660. (Johann Philip Lemke, drawn while in Germany)

Since many senior officers had spent years in Swedish service during the Thirty Years' War, tactics were essentially identical to those in the Swedish army. At the time when Brandenburg supported Sweden, some Brandenburg units were permanently moved into Swedish service. This was obviously facilitated by the fact that they were organised and trained in the same manner.

Arms, Armour and Dress

The arms, equipment, and dress of the Brandenburg army was, again, essentially identical to those in the Swedish army.

The cavalry was armed with pistols and rapier (and possibly carbine in some units although most certainly only carried pistols), which indeed was the recommended armament in the Swedish army, which Brandenburg had copied.

Dragoons and infantry, too, were armed in the Swedish manner. Pikemen were expected to wear helmet, breastplate and backplate. In 1656, the Elector ordered all musketeers to carry swinefeathers of the Swedish type.

The regimental artillery of the infantry regiments at first consisted of three-pounders and four-pounders. During the war, the three-pounders were gradually replaced by four-pounders.

There is little surviving information on Brandenburg uniforms. The French envoy to Brandenburg, Jean (Johann) Frischmann, in 1658–1659 noted: 'The troops of the Elector totalled some 8,000 horse that were not so well mounted as the Imperials and equipped with only pistols, and the infantry consisted of 3,000 men, good soldiers, all dressed in blue cloth.'[24]

Navy

When the wars of the Deluge broke out, Brandenburg had no fleet.[25] Moreover, no funding was available. To remedy this omission, the Elector in late 1657 began to form a diminutive fleet, at first consisting of a pinnace (later referred to as a frigate) known as *Clevische Lindenbaum*, a flute of the Dutch model (the most common type of cargo-carrier in the region) known as *Kurfürst von Brandenburg*, and the Elector's unnamed leisure yacht. Each vessel was manned by a few sailors and soldiers. Commanded by Colonel Johann von Hille (who incidentally also had enlisted a weak army regiment), it participated in but had no impact on the wars.[26]

---

[24] Cited in Daniel Staberg, 'Brandenburgers, Imperialists and Poles in Denmark' (*Kriegsbuch* blog, 2012; <www.kriegsbuch.blogspot.com>).

[25] Glete, *Navies and Nations*, p.686.

Tables

Table 9 (see p.166). Brandenburg's Standing Army, Early 1655

Source: Jany, *Urkundliche Beiträge*, vol. 1, pp.117–18

Territory	Companies
Prussia	
Prussian Life Guard of Foot	1
Garrison Infantry	5
Mark Brandenburg	
Mark Life Guard of Foot	1
Garrison Infantry	8
Life Guard of Horse	1 (63 men)
Pomerania	
Garrison Infantry	4
Halberstadt	
Garrison Infantry	1
Westphalia	
Garrison Infantry	9
Grand Total	30

---

[26] Roessel, *Die erste Brandenburgische Flotteim Schwedisch-Polnischen Kriege 1658–1660 und ihr Kommandeur Obrist Johann von Hille* (Berlin: R. Eisenschmidt, 1903), pp.19–78.

Table 10 (see p.170). Brandenburg's Army in Prussia, June 1656

Source: Jany, *Urkundliche Beiträge*, vol. 7, pp.65–6

Note that many regiments were still in the process of enlisting men. Moreover, the number of officers and under-officers in most cases seems to correspond to the number of companies, which means that the figure either is too low, or the company strength is exaggerated, perhaps because establishment strength was not yet reached. Many Brandenburg units never reached establishment strength.

Regiment	Officers & Under-Officers	Men
Cavalry		
Life Guard of Horse (under Oberstwachtmeister Christian von Klitzing)	7	700
Georg Friedrich von Waldeck	12	1,200
Christoph von Kannenberg	10	1,000
Wolf Ernst von Eller	6	600
Heinrich von Wallenrodt	4	400
Georg von Schönaich	8	400
Heinrich von Halle	3	300
John George of Saxe-Weimar	6	600
Christoph de Brunell	3	300
Georg Heinrich von Wallenrodt	8	800
Dietrich von Lesgewang (under Heinrich von Kalnein)	2	200
Johann Schmidt	2	200
Putlitz	1	100
Georg Wilhelm von Massenbach	1	100
Total	73	6,900
Dragoons		
Life Guard Dragoons	1	200
Georg Friedrich von Waldeck	5	555
Elias von Canitz	4	400
Christian Ludwig von Kalckstein	5	500
Heinrich von Halle	3	300
Hans Georg von Auer	3	300
Christoph von Kannenberg	1	100
Heinrich von Wallenrodt	1	100
Georg von Ritterforth	8	800
Total	31	3,255
Infantry		
Life Guard of Foot	6	1,279

Regiment	Officers & Under-Officers	Men
Otto Christoph von Sparr	12	1,200
Georg Friedrich von Waldeck	6	600
Wolrad von Waldeck	12	1,200
Joachim Rüdiger von der Goltz	8	800
Johann Georg von Sieberg	12	1,200
Jonas Casimir zu Eulenburg	10	1,000
Adolph von Götz	10	1,000
Heinrich von Halle	4	400
Total	80	8,679
Grand Total	184	18,834

Table 11 (see p.170). Brandenburg's army in Prussia and Ermland, February 1657
Source: Jany, *Urkundliche Beiträge*, vol. 7, p.67

Note that in this summary, the Trabant Guard is not included in the Life Guard. However, the number of men in each company is obviously based on averages, and since the list was intended to calculate contributions, the total number is probably exaggerated.

Regiment	Companies	Men
Cavalry		
Life Guard of Horse	9	900
Georg Friedrich von Waldeck	8	800
Christoph von Kannenberg	8	800
Wolf Ernst von Eller	6	600
Heinrich von Wallenrodt	4	400
Georg von Schönaich	4	400
John George of Saxe-Weimar	6	600
Heinrich von Halle	4	400
Georg Heinrich von Wallenrodt	6	600
Hans Georg von Strein	4	400
Georg Albrecht von Polentz	4	400
Ludwig Christian zu Wittgenstein	5	500
Johann Schmidt	3	300
Joseph von Katzeler	4	400
Georg Wilhelm von Massenbach	1	100
Georg von Derfflinger	8	800
Joachim Ernst von Görzke	4	400
Albrecht Christoph von Quast	4	400
Georg Adam von Pfuel	4	400

Regiment	Companies	Men
Johann von Hille	4	400
Total	100	10,000
Dragoons		
Life Guard Dragoons	1	100
Otto Christoph von Sparr	10	1,000
Georg Friedrich von Waldeck	5	500
Elias von Canitz	4	400
Heinrich von Halle	2	200
Total	22	2,200
Infantry		
Life Guard of Foot	6	1,000
Otto Christoph von Sparr	12	1,200
Georg Friedrich von Waldeck	10	1,000
Wolrad von Waldeck	8	800
Adolph von Götz	8	800
Christoph Friedrich von Dobeneck	6	600
Johann von Klingspor	6	600
Jonas Casimir zu Eulenburg	6	600
Johann Georg von Sieberg	7	700
Heinrich von Halle	3	300
Dietrich von Lesgewang	1	100
Christoph Hildebrand von Nettelhorst	2	200
Georg von Ritterforth	8	800
Total	83	8,700
Grand Total	205	20,900

Table 12 (see p.170). An assessment of the Elector's armed strength in Prussia alone, based on archival documents and exclusive of garrisons elsewhere in Brandenburg's territories.
Source: Augusiewicz, 'Skład i liczebność', p.45

Note that the actual strength in manpower is based on averages multiplied with the number of listed companies. While it seems certain that some additional units had been raised in or moved to Prussia, including 1,700 dragoons already in June 1656, the table offers a good overview of the respective proportions over time.

Year	Cavalry	Dragoons	Infantry
June 1656	5,500	-	6,650
December 1656	7,500	1,700	7,100
July 1657	6,700	1,450	7,100
January 1658	1,400	-	2,300
July 1658	2,100	1,300	3,950
June 1659	3,150	1,600	4,450

5

The Muscovite Military Establishment

If the military customs of the Commonwealth can be said to have been a blend of Eastern and Western influences, the traditional military establishment inherited by Tsar Alexis of Muscovy entirely derived from the Mongol military model. By tradition, highly mobile horse archers constituted its primary component, stiffened by heavy cavalry. At this point in time, light cavalry remained very common, in the form of Tatars and cossacks. Heavy cavalry, too, constituted an important part of the military establishment, based on families of various social rank defined by their hereditary military service. Present academic practice is to refer to them collectively as hereditary servicemen.[1]

This meant that Muscovy's traditional military forces employed forms of organisation and types of tactics which differed radically from the Swedish model. A comparison can be made with the Commonwealth's military. Yet, the Muscovite military establishment remained even more eastern in orientation and also included numerous influences from the Ottoman Empire and the Caucasus.

However, while Muscovy had retained its traditional troop types, the Muscovite model had developed further and with less reluctance than in the Commonwealth. By the time of the Deluge, Muscovy fielded soldiers with more up-to-date training and armament, known as new formation units. The first of their kind were trained during the Thirty Years' War by officers in Swedish service and according to Swedish standards.[2]

During the war, Muscovy also introduced innovations with regard to higher formations. Most important was the concentration of forces along the southern border which was known as the Belgorod Division (Russian: *Belgorodskiy polk*). In May 1658, this term became official with the introduction of a Belgorod regional military command (*Belgorodskiy razryad*) as part of the general reform of government along the borders. The Belgorod regional military command (perhaps, army group would be a better term) included both old and new units as well as garrison troops. However, the primary cutting edge of the Belgorod Army, for so we will call the formation while on campaign, consisted of seven modern new formation units: three cavalry regiments (two of which were understrength), three dragoon regiments, and four infantry regiments. During the summer, two newly raised new formation infantry regiments were added to the Belgorod Army. One of them, the Kozlov Regiment, exclusively consisted of veterans. In total, the Belgorod Army then included about 17,000 garrison troops, which included artillerymen, and 19,200 soldiers on campaign service in several field armies, the latter including two new formation cavalry units, four dragoon regiments, six new formation infantry regiments, and only 2,000 old-style cavalrymen (that is, some 10 percent of the total), in addition to a regiment (*prikaz*) of 600 streltsy (for this troop type, see below). In total, there were then 16,600 new formation servicemen in the Belgorod Army.[3] It was a modern military force, many of its soldiers were veterans, and it formed a model for later Muscovite armies.

---

[1] For more details about the Muscovite military system, see Fredholm von Essen, *Muscovy's Soldiers*.

[2] On the origin of the new formation units, see Fredholm von Essen, *Lion from the North*, vol. 1, p.222.

Tactical Doctrines

On the battlefield, Muscovite cavalry still fundamentally relied on Mongol tactics. Highly mobile horse archers were used for harassing slow-moving enemy forces. When confronted with enemy cavalry, the Muscovite cavalry first aimed to engage with archery, then withdrew in feigned flight until the pursuing enemy could be attacked in the flank by other Muscovite cavalry or rashly followed all the way into the range of fire of the Muscovite artillery or infantry, and into an ambush if possible. Raiding and looting were frequently used as a weapon of terror, to reduce the enemy population's will to resist. Many of the enemies of Muscovy concluded, wrongly, that the raiding served no other purpose than destruction. This was not quite true, although it has to be admitted that a number of campaigns consisted of little but the raiding, looting, and burning of border villages. Moreover, in the frontier areas Muscovy often suffered from a population deficit, so an established practice was to bring home captured peasants and experienced craftsmen who would then be settled as Muscovite subjects where additional labour was needed.

However, tactics had begun to change with the introduction of the Swedish-style new formation units. With them had followed tactics of the Continental model which did not fundamentally differ from those used by Swedes, Brandenburgers, or for that matter, the significant numbers of enlisted German soldiers in Commonwealth service.

---

[3] Babulin, *Bor'ba za Ukrainu*, pp.77–8; Carol Belkin Stevens, *Soldiers on the Steppe: Army Reform and Social Change in Early Modern Russia* (DeKalb: Northern Illinois University Press, 1995), p.34.

Organisation

The Muscovite army organisation was based on the old Inner Asian division into units of nominally 10, 100, and 1,000 men. Organisationally, Muscovite soldiers were divided into 'thousands' (*tysyachi*), 'hundreds' (*sotni*, sing. *sotnya*), 'half-hundreds' (*polusotni*), and 'tens' (*desyatki*), respectively commanded by 'leaders of thousand' (*tysyatskiye*, or *voyevody*), 'headmen' (*golovy*), 'leaders of fifty' (*pyatidesyatniki*), and 'leaders of ten' (*desyatniki*).

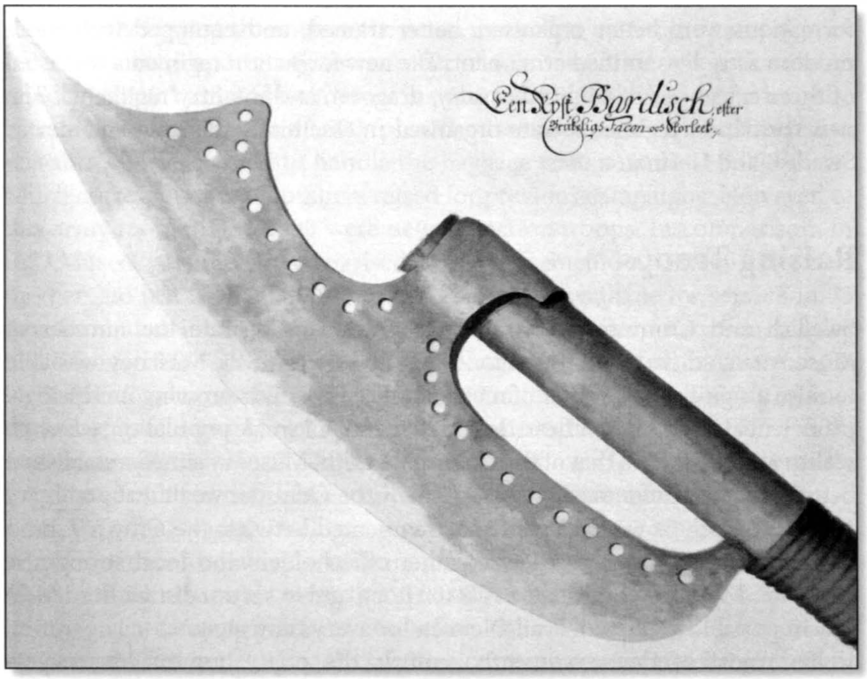
An army, if not led by the Tsar himself, was commanded by the most senior ranking prince or noble. The Tsar's retinue was commanded by a quartermaster-general (*okol'nichiy*), a title perhaps of Mongol origin that by tradition had become one of the highest ranks. The units within the old-style cavalry were commanded by military officers known as voivodes (*voyevoda*, pl. *voyevody*). It will be remembered that the Commonwealth used the same term for the commander of a province. *Voyevoda* merely means military leader, and the title, originally used for the leader of a traditional princely retinue (*druzhina*) or a general levy of commoners (*opolcheniye*), was in the old-style cavalry used for the commander or deputy commander of a division (*polk*) within a Muscovite army. As in the Commonwealth army, the term *polk* (Polish: *pułk*) eventually acquired the meaning of regiment. However, this development had not yet taken place in the traditional Muscovite army.

In the field, the Muscovite military system relied on the traditional Mongol division of armies into five tactical units: vanguard, main force, left and right wings, and rearguard. It will be remembered that the very same order of battle existed in Commonwealth armies where it was known as the 'Old Polish Order'. In Muscovy, the army generally formed up in either a small array, consisting of three divisions, or a large array, of five. The small array consisted of the centre or great division (*bol'shoy polk*), the right wing or arm (*pravaya ruka*), and the left wing or arm (*levaya ruka*). To this were added, in the large array, the vanguard (*peredovoy polk*) and the rearguard (*storozhevoy polk*). Each was commanded by a voivode, selected from among the princes and boyars (nobles). The size of the divisions varied greatly, from 300 to more than 15,000 men.[4] Most common were probably divisions consisting of some 2,000 to 5,000 men, but the great division in particular might be considerably stronger. The great division was commanded by the 'great voivode' (*bol'shoy voyevoda*), who in the absence of the Tsar at the same time served as commander-in-chief. Each voivode had a subordinate voivode within his division.

The order of seniority was the great division which held primacy, followed by the right arm division, the vanguard division, the rearguard division, and the left arm division, in this order. It follows that this was also the order of seniority of the divisional voivodes.

---

[4] A.V. Chernov, *Vooruzhennye sily Russkogogo sudarstva v XV-XVII vv.: S obrazovaniya tsentralizovannogo gosudarstva do reform pri Petre I* (Moscow: Voyennoye Izdatel'stvo Ministerstva Oborony Soyuza SSR, 1954), ch. 1. Available from Biblioteka Khronosa website, <www.hrono.ru/libris/lib_ch/chrnv00.html>.



Berdysh pole-axe, of the type employed by the streltsy. (Erik Palmquist, 1674).

The great division was the main force of the army while on the march and in battle formed its centre in the line. Every army could have its own great division. Along with the five main divisions, there might at this time also be a light cavalry reconnaissance division (*yertaul'nyy polk*; from Turco-Mongol *yortaghul*, 'raiding party') commanded by another voivode (*voyevoda yertaul'nyy*), and possibly a force of artillery (*naryad*), commanded by an artillery voivode (*voyevoda ot naryada*). Other voivodes commanded any units of non-Russian troops, such as Tatars.

The Muscovite military system also included traditional infantry units known as streltsy ('shooters'; *strelets*, pl. *strel'tsy*). A streltsy regiment (*prikaz*) was divided into companies of about 100 men each, a company accordingly being known as a *sotnya* (hundred) like the corresponding unit in the traditional cavalry. The regiment was commanded by a headman (*golova*), under whom served a deputy (*podgolova*),[5] below whom were commanders of respectively 100 men (*sotniki*), 50 men (*pyatidesyatniki*), and 10 men (*desyatniki*).[6] A streltsy regiment might consist of 500 to 1,000 streltsy. Each regiment had its integral artillery, consisting of from six to eight cannons.

To this traditional structure was in 1630 added, with the introduction of 'new formation regiments' (*polki novogo stroya*), the beginnings of the modern Muscovite army, organised in the Swedish manner. The old term *polk* was retained, but for the new formation regiments, it was no longer used with the old meaning of cavalry division – since it henceforth indicated a regiment of the Continental type. As compared to the traditional military forces, the new formations were better organised, better trained, and equipped with more modern as well as unified armament. The new formation regiments consisted of three categories of soldiers: cavalry, dragoon, and infantry regiments. The new formation regiments were organised in essentially the same manner as Swedish and German units.

---

[5] Grigori Carpofsson Cotossichin [Kotoshikhin], *Beskrifning om muschofsche rijkets staat* (Stockholm: Ljus, 1908; first published in 1669), p.73.

[6] Chernov, *Vooruzhennye sily*, ch. 2.

Raising Troops

Swedish and Commonwealth sources tend to exaggerate the number of Muscovite soldiers, sometimes considerably so. However, Muscovy was able to raise a significant number of men, and moreover, was growing increasingly proficient at it. This had little to do with the available male population, which in reality was lower than that of the Commonwealth. Muscovy simply established better procedures for raising soldiers than the Commonwealth, the military might of which as we have seen was fragmented between the Crown, Grand Duchy, magnates, and a variety of other officeholders and local strongmen. However, Muscovy controlled a vast territory, and to secure distant borders, it was impossible to raise all available men for every campaign.

For most of the seventeenth century, the population of Muscovy is estimated at around some 11 to 12 million people.[7] Both contemporary and modern observers have assessed the potential maximum size of the Muscovite armed forces at the end of the previous century as being probably around 110,000, of which somewhat more than 40,000 might serve in any given campaign season. The rest would be available for garrison service. This means that less than one percent of the population was available for mobilisation, and of them, only about a third was actually called up at any one time. However, under the Romanov rulers of whom Tsar Alexis was a significant reformer, the procedures for raising soldiers improved significantly.

According to the service lists, the total manpower of the Muscovite army had in 1651 increased to 133,210 men. This figure primarily included 39,408 old-style cavalry (30 percent), 44,486 streltsy (33.5 percent), 21,124 cossacks (15.5 percent), 8,107 new formation dragoons (6 percent), 9,113 Tatars (6.5 percent), 2,371 Ukrainian cossacks (2 percent), 4,245 artillerymen (3 percent), and 2,707 foreign soldiers (2 percent).[8]

Moreover, the conscription efforts of Tsar Alexis certainly resulted in increasing numbers of new formation troops. Indeed, the ongoing recruitment of new formation troops is not included in the list, except for dragoons which already were well-established on the southern border. In spring 1654 the army already included 22 new formation infantry regiments.[9] Moreover, the wars against the Commonwealth and Sweden served as further stimulus, and certainly Muscovy had grown more proficient in raising soldiers at the later stages of these wars than when the army was called up for the campaign in 1654. Yet more importantly, the number of new formation troops increased rapidly. When Vasiliy Sheremetyev in 1660 led the Belgorod Army into the Ukraine, its strength was 40,000 (plus, thousands of serving bondsmen and servants, as well as men to handle the baggage train of at least 3,000 carts), which corresponded to numbers raised for previous campaigns. However, of this army more than 11,000 were new formation troops. In comparison, in 1663 Muscovy claimed to have raised 98,000 men, including 31,000 infantry.[10] By then, no less than 50,000 to 60,000 men were available for service in 55 new formation infantry regiments. The number of new formation cavalry had risen to 18,000 (more than 19,300 with officers included).[11] And in 1667–1669, Muscovy mustered more than 112,000 men for the campaigns against the cossacks of Right-bank Ukraine hetman Pyotr Doroshenko (1627–1698) who nominally remained subject to the Commonwealth but then in reality fought on behalf of the Crimean Khanate and the Ottoman Empire.[12]

---

[7] John LH. Keep, *Soldiers of the Tsar: Army and Society in Russia, 1462–1874* (Oxford: Clarendon, 1985), p.88.

[8] Chernov, *Vooruzhennye sily*, p.175. The figures do not add up but give a fair approximate value.

[9] I.B. Babulin, *Smolenskiy pokhod i bitva pri Shepelevichakh 1654 goda* (Moscow: Russkiy e vityazi, 2018), p.24.

In 1674,the Swedish intelligence officer Erik Palmquist estimated the total number of men available for military purposes in Muscovy to be 300,000, of which a third, somewhat more than 100,000 men, might serve on active duty in any given campaign season. As before, the rest would still be available for garrison service.[13] Palmquist's figures correspond to about 2.5 percent of Muscovy's total population. This figure is not oppressive and, from the point of view of the general population, compares favourably to that of Sweden, which as we have seen mobilised in excess of six percent of the population without suffering any particular hardship.

For sure, some regions were more militarised than others. We will see that in the south, where the risk of Tatar raiding often was imminent, military duties accordingly heavy, and population sparse, an estimated five percent of the population was enlisted in military service in one way or another.[14] Military service also required a significant share of manpower on the western border, including in key towns such as Novgorod and (after its capture) Smolensk. However, the war also resulted in significant migration into Muscovy from the Ukraine. Many were settled in distinct communities as cossacks with duties to serve in the Muscovite army. As a result, the totals available for military service were significant, far higher than could be raised by most neighbouring states except the Ottoman Empire.

Muscovy used separate systems for the raising of cavalry and infantry. Cavalry was primarily raised in the traditional manner. By this tradition, the entire Muscovite population fell into two categories: those who performed military service and were known as servicemen (*sluzhilyye lyudi*) and those who paid taxes (*tyaglyye lyudi*). Among those who performed military service, the upper-level members, the boyars (*boyarin*, pl. *boyare*) or nobility, were the descendants of the princely retinues of the Middle Ages. They had the right to collect their own 'feedings' (*kormleniye*, pl. *kormleniya*), in lieu of salaries, from the taxpayers they governed on behalf of their sovereign. But the majority of servicemen were not boyars. Instead, they belonged to the category of men known as 'hereditary servicemen' (*sluzhilyye lyudi po otechestvu*). This category was in itself divided into those of provincial rank, who were in the majority, and those of Moscow rank, who were considered senior in status. All hereditary servicemen served on the basis of land ownership, either an inherited patrimonial freehold (*votchina*, pl. *votchiny*; 'in the family') or a service land grant (*pomest'ye*, pl. *pomest'ya*) which was conditional on lifelong and unlimited military service. Service landholders of the latter category were known as *pomeshchiki*. The land grant privilege, too, was heritable; however, although a son was entitled to a land grant, it would not necessarily be the same land that his father had held. The hereditary servicemen could be seen as a low-level nobility or gentry, but in reality, many held limited land and accordingly were no wealthier than most taxpaying peasants. Over time, some actually grew poorer than the taxpaying peasants, since they lacked the time to farm or otherwise manage their lands.[15] The service landholding system was the result of the persistent problem for the Muscovite government to mobilise and use resources that were both limited and scattered over a vast territory, without at the same time allowing centrifugal forces to break up the Muscovite state. The land grant system, like the previous 'feeding' rights, may have been adopted from a similar system of Mongol origin.[16] There was a common understanding that in times of war, 'should anyone show himself to be courageous in battle and stain his hands with the blood of the enemy, he would be honoured with gifts, both movable and immovable.'[17] The immovable gift would be a land grant.

---

[10] Richard Hellie, *Enserfment and Military Change in Muscovy* (Chicago: University of Chicago Press, 1971), p.271; Stevens, *Soldiers on the Steppe*, pp.57–8.

[11] Chernov, *Vooruzhennye sily*, ch. 5; Hellie, *Enserfment and Military Change*, pp.196, 198, 269.

[12] Hellie, *Enserfment and Military Change*, p.271.

[13] Fredholm von Essen, *Muscovy's Soldiers*, p.121. Palmquist's estimate seems to have been fairly accurate in the light of the numbers which Muscovy was able to mobilise in the following decade.

[14] Stevens, *Soldiers on the Steppe*, p.29.

Both boyars and hereditary servicemen served in the old-style cavalry, which had not changed much from previous centuries. By tradition, the old-style cavalry still also included the Tsar's personal retinue, the household or 'court' (*dvor*). The retainers (*dvoryanin*, pl. *dvoryane*, in this period possibly best translated as 'household retainers') were based in Moscow and received service land grants to support themselves. On campaign, the Tsar's *dvor* was augmented by his provincial retainers, generally from, and as groups named after, their respective towns. Such a provincial retainer was known as a 'son of a boyar' (*syn boyarskiy*, pl. *deti boyarskiye*). The relationship was not necessarily one of kinship, however, since the term also could refer to a dependent of a noble household. Registered in the towns and dependent on service land grants for their upkeep, they served in town contingents. Each was obliged to bring his own armed serving men (*sluga*, pl. *slugi*), provided for and armed at his expense. They were usually well armed, since it was only a wealthy noble who could afford to bring his own armed men. Accordingly, he could also afford to arm them properly. The old-style cavalry accordingly consisted of men of different categories: members of the Tsar's personal retinue (*dvoryane*), nobles (*boyare*), hereditary servicemen (*deti boyarskiye*), and serving men (*slugi*) in the attending retinues. By this time, there was little difference between the court retainers and the hereditary servicemen. They were often referred to, collectively, as *dvoryane i deti boyarskiye*. By one way or another, all except the serving men depended on land grants for their upkeep. Furthermore, all except the serving men had to arm and equip themselves at their own expense.

---

[15] A comparison can be made with the Swedish system, in which land grants and tax-exempt status were used to finance the raising of permanent soldiers.

[16] Donald Ostrowski, *Muscovy and the Mongols: Cross-Cultural Influences on the Steppe Frontier, 1304–1589* (Cambridge: Cambridge University Press, 1998), pp.48–9, 54.

[17] J.L.I. Fennell (ed.), *Prince A.M. Kurbsky's History of Ivan IV* (Cambridge: Cambridge University Press, 1965), p.23.

Although the old-style cavalry by tradition was regarded as the primary arm of the Muscovite military establishment, Muscovy also developed a tradition of raising good infantry (the aforementioned streltsy) and skilful artillerymen. Such men were recruited into service through a contract which obligated them to serve in exchange for payment. They were accordingly known as 'contract servicemen' (*sluzhilyye lyudi po priboru*), which made them servicemen, too, although they were regarded as socially inferior to the servicemen of the old-style cavalry. Contract servicemen lived in separate neighbourhoods within the towns. They were paid in cash and provisions and also received collective land grants so that they could support their families.

By the time of the Deluge, the traditional system of raising hereditary and contract servicemen supported by land grants remained paramount and the servicemen were without question regarded as more prestigious than other types of soldiers. However, the traditional system had already been challenged by the introduction of the new formation regiments, which were raised differently.

When first established, the new formation regiments had been raised abroad, through the enlistment procedures common in Continental Europe. However, when new formation regiments again were raised from1648 onwards under Tsar Alexis, this practice was largely abandoned. Instead, the conscription of native Muscovites became the standard means of raising troops, even though the new formation regiments were trained and armed on Continental lines. Although most new formation regiments still contained German, Dutch, Scots, and English officers, by the time of the Deluge fundamentally all common soldiers and some officers were Muscovites.[18] Even so, many old-style servicemen still scorned the new formation regiments and refused to serve in them even as officers.[19]

At the time of the Deluge, the old-style Muscovite cavalry still performed well in the mobile battles that remained typical of Eastern warfare. However, the campaigns of the Deluge exposed the old-style cavalry's inability to arm, feed, and supply itself during prolonged war. The need for new formation regiments increased rapidly, and the significant losses suffered especially in the latter stage of the Deluge accelerated this process.[20] In a break with prevailing tradition, Tsar Alexis initiated mass conscription into the new formation regiments on the basis of census rolls. In 1658, and again in 1659, 1660, 1661, and 1663, what to all extents were mass nationwide conscription efforts took place. Throughout much of Muscovy, one man was drafted from every 25 taxable households.[21] Although conscription was not universal, it had become sufficiently prevalent to be regarded as general conscription. The conscription efforts also impacted upon the old-style cavalry. In 1659–1660, sons of hereditary servicemen who had not yet been formally initiated into hereditary old-style cavalry service were, without their consent, drafted for permanent service into the new formation cavalry. In total, 2,050 hereditary servicemen were thus removed from the old-style cavalry and reassigned into the new, since the latter was considered militarily more effective. Cossacks, experienced infantrymen, and even taxpaying, drafted peasants were put into the new formation cavalry. Consequently, as we have seen, the number of new formation cavalrymen rose from 2,000 in 1653 to more than 19,000 in 1663.[22] Henceforth, conscription would play a key role for the raising of troops.

---

[18] Hellie, *Enserfment and Military Change*, pp.170–72.

[19] *Ibid.*, p.192.

[20] Stevens, *Soldiers on the Steppe*, pp.28–9, 103.

The losses suffered during the war, and the often harsh conditions during which troops were conscripted and assigned into new formation units, often caused resentment. Desertions took place frequently, although perhaps no more frequently than in other armies. Punishments were harsh, although again possibly not more so than in other armies at the time. Moreover, as we have seen, Tsar Alexis made sure that they were not always carried out.

Training

Despite the successful mobilisation effort, the conscripted new formation regiments did not yet constitute a standing army. Although command structure, armament, and tactics grew more alike, the troops were only paid when on active duty. After each campaign, many soldiers were regularly dismissed, with the serfs being returned to their fields. And after the war, when the need for cavalry felt less pressing, the former infantrymen and peasants who had been conscripted into the new formation cavalry were dismissed and sent to the infantry or into garrison service.

The Muscovite army fundamentally failed to address the need for continuous training. In similarity to the Commonwealth Levy of the Nobility, the old-style cavalry essentially never trained in units. The hereditary servicemen were not only intended to be self-supported financially and logistically, they were also fundamentally self-trained. This meant that their personal, martial capacity varied considerably, with those of a military bent being far more proficient than those who merely served to uphold family tradition and safeguard their land grant. Moreover, they were generally not proficient in operating as a unit, since they hardly ever trained in formation. Although it can be assumed that those hereditary servicemen who spent their life on campaign would develop a certain proficiency, regardless of personal circumstances, there was no military training in times of peace, beyond the occasional roll call for muster purposes. There were also no tactical exercises and manoeuvres. Their military usefulness depended on individual prowess, not unit training.

---

[21] Carol B. Stevens, *Russia's Wars of Emergence 1460–1730* (London: Routledge, 2013), p.162.

[22] Chernov, *Vooruzhennye sily*, ch. 5; Hellie, *Enserfment and Military Change*, pp.198, 269.

The key reason for this was that the Muscovite economy, unlike that of the Commonwealth, simply was unable to sustain a large, standing army. This became obvious first with the streltsy regiments, and then with the new formation regiments. There were no training depots for new recruits, nor did Muscovy have the financial resources to raise, arm, and train such recruits during an ongoing campaign. Mobilising an army was an effort in itself, and there was no system, and indeed no available resources, for raising additional, untrained men, when replacements were needed. The persistent lack of funding caused by the Muscovite state poverty meant that infantrymen had to be effectively demobilised when no longer needed, and then switched to individual trades to support themselves. With few exceptions, Muscovite units were standing forces on paper only. They could be mobilised, but to prepare them for campaign duties, any training would have to start all over from scratch, at least if they were expected to operate at full capacity as a unit.

For this reason, Muscovy still relied heavily on foreign mercenary officers. Based on data from the 1660s, of 277 known staff officers (colonels, lieutenant colonels, and majors), all but 18 were foreigners. Of 1,922 company officers (captains, lieutenants, and ensigns), about two-thirds were foreigners, with only 648 Muscovites among them. The high share of foreign officers had a significant impact on the units under their command, since Muscovy aimed to maintain a high proportion of officers to men (1:20 on average in the infantry and dragoon regiments).[23] The high proportion of officers to men was essential for retaining some level of continuity in organisation and military skills, since even the new formation units had to be demobilised when no longer needed, because of the persistent lack of funding.

Old-Style Cavalry

With regard to arms and equipment, the old-style cavalry remained much as it had been in the past, although Tsar Alexis raised the age of initiation (the ceremony though which a young man entered the service) to 18.[24] As before, the old-style cavalry was not uniformed but turned out in civilian dress.[25] The clothes worn by Muscovites at the time were, like those elsewhere in the region including within most of the Commonwealth, of Inner Asian origin, ranging from the caftan to the high, soft boots associated with equestrian nomads.

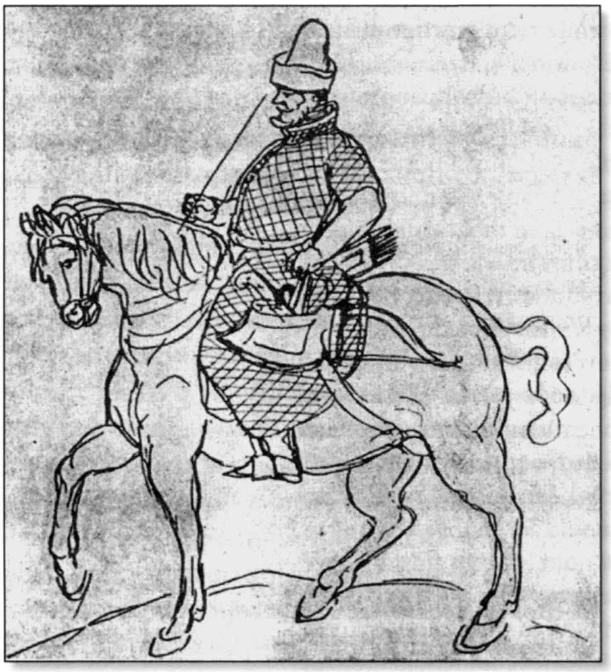
Likewise, the chief Muscovite weapon remained the Inner Asian composite bow, which like the accompanying bow case and quiver was of Mongol type. In seventeenth-century Muscovy, a complete set of cavalryman's armaments,

---

[23] Davies, *Warfare, State and Society*, p.135.

[24] Belyayev, *O russkom voyske*, p.26.

[25] See, for example, Aleksey Abramov, 'Reforma sluzhilogo plat'ya, 1680', *Zeughaus* 45 (2012), pp.2–11.



Muscovite old-style cavalryman in *tegilyay*, sketched from a serviceman in the retinue of the Muscovite embassy to Georgia, 1641. (Teramo Cristoforo Castelli)

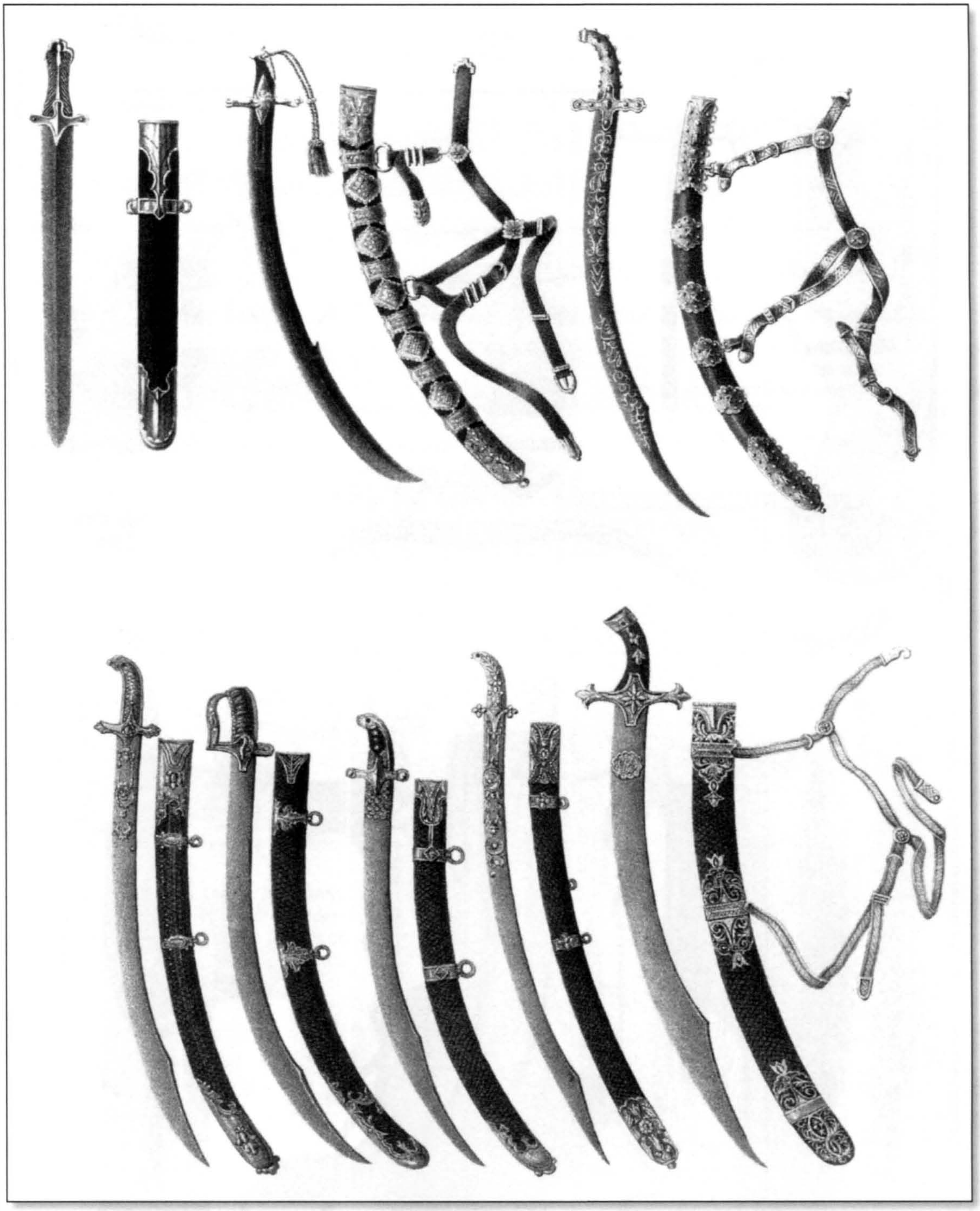
including a bow in its bow case and a quiver full of arrows, was known as a *saadak*. An officer would carry a mace, in the mediaeval Mongol tradition. Those who could afford it wore mail or scale armour of traditional Turco-Mongol type, with metal plates, joined by straps, to protect the chest, back, arms, and legs, such a suit of armour being known as *zertsalo* ('mirror'). If this was beyond their means, Muscovite cavalry instead often wore a short-sleeved, high-collared, densely padded hemp coat (*tegilyay*, from the corresponding Mongol term), a type of armour which indeed grew more common in this period until metal armour fell out of use among all except the most senior and wealthy nobles. Sometimes the *tegilyay* included iron bands or even armour plate fastened inside. A related type of armour was the brigandine (*kuyak*, again from the corresponding Mongol term), a garment of cloth or leather reinforced with metal plates from both sides, of the type commonly used by Mongols. Like Tatars and Mongols, those Muscovites who could afford it wore silk garments under their armour.[26] The conical, spiked iron helmet, too, was of Mongol, or to be more specific, Turco-Persian type. As noted, it was known as *misyurka*. Originally quite tall, helmets over time gradually developed into a more flattened shape. Some who could not afford an iron helmet instead wore a padded cloth or brigandine (*kuyak*) helmet with a metal nasal sewn on.

Over time, the use of armour disappeared completely, and the cavalryman became a mounted archer with only a sword, a dagger, and perhaps an axe hanging at the saddle-bow as sidearms. A horseman carried both his whip and sabre fastened to his hands with straps, so that he could drop them both when shooting the bow. Muscovite cavalrymen rode horses in the Mongol style, with short stirrups that allowed them to stand clear of the saddle. They used Mongol saddles and stirrups, and relied on a Mongol-style short whip (Russian: *nagayka*) instead of spurs. Horses were unshod.

Requirements for the armament of the old-style cavalry had been slightly updated in 1643, but not very much. The new regulations said that henceforth, all were required to have a pair of pistols (typically wheellocks) and a musket. However, those who still considered the bow their primary weapon could choose to have either a pistol or a carbine as auxiliary firearm. The serving men brought by the wealthier nobles could be armed with bows only, but only as long as they were trained archers. If not, they had to serve with muskets or carbines. Those who carried muskets in most cases had to dismount to fire, which in effect made them no more militarily useful than levied infantry. Even

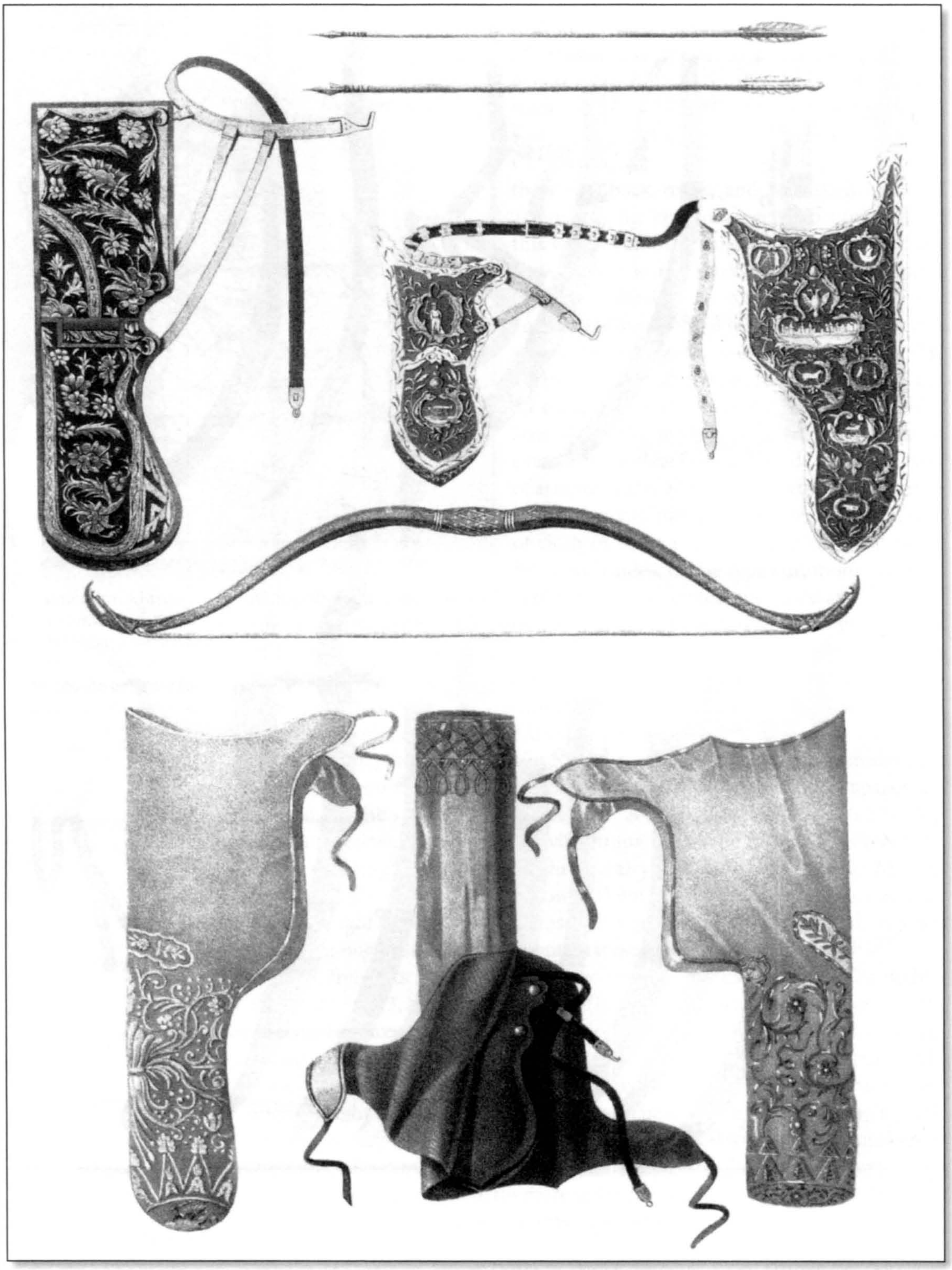
---

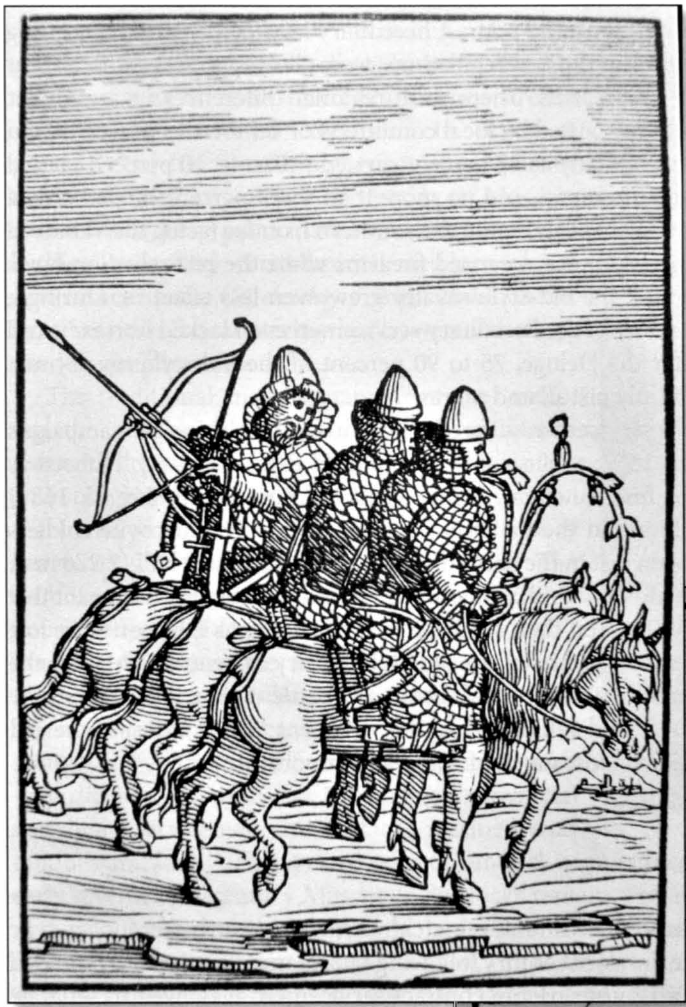
[26] Richard Chancellor, *Voyages* (1589), in Lloyd E. Berry and Robert O. Crummey (eds), *Rude & Barbarous Kingdom: Russia in the Accounts of Sixteenth-Century English Voyagers* (Madison: University of Wisconsin Press, 1968), p.28.



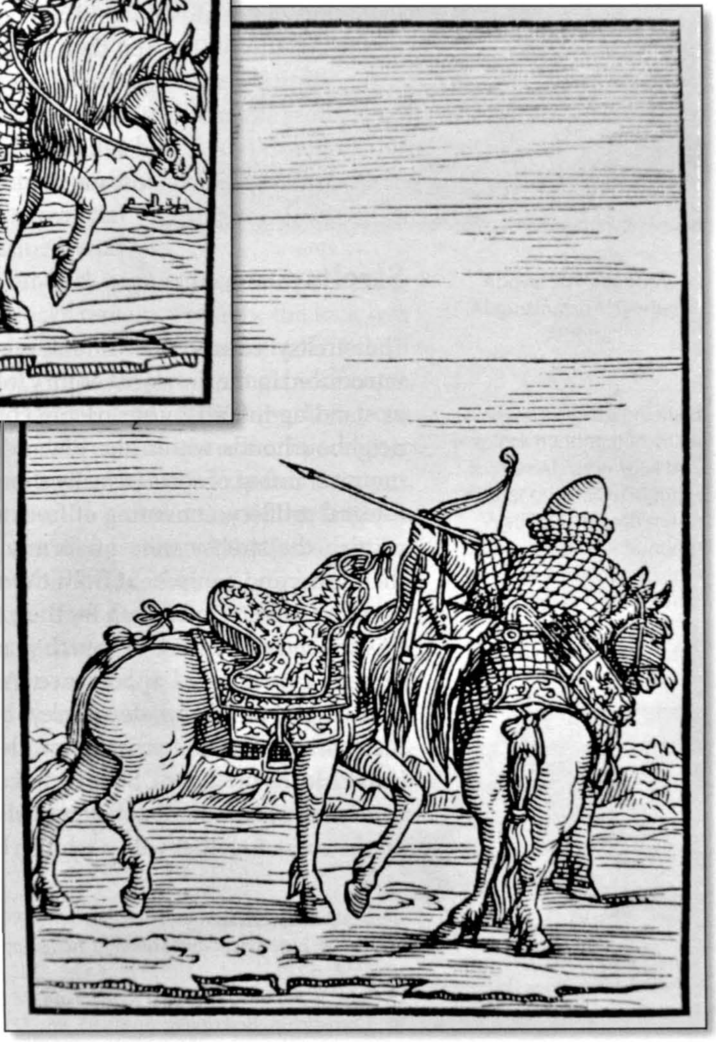
Above: Muscovite sabres. (Aleksandr Viskovatov, 1841)

Overleaf: Muscovite *saadak* set, including bow case and quiver. (Aleksandr Viskovatov, 1841)





Left: Muscovite mounted archers in *tegilyay*, one with his sabre fastened to a strap, another with whip in hand. (Sigismund von Herberstein, 1549).



Right Muscovite mounted archer in *tegilyay*. Although this illustration is a century older than the one by Teramo Cristoforo Castelli, on p.190, the old-style cavalry had changed little. (Sigismund von Herberstein, 1549) less militarily useful were the poorest hereditary servicemen who, according to lenient exceptions in the new regulations, were allowed to serve with a spear and axe instead of firearms. There were regional differences in armament, which may have been caused by local conditions or differences in wealth. On the western front, as many as 87 percent carried firearms, 10 percent carried a bow as their main weapon, and no more than three percent carried only a sabre, an axe, or a bear spear. But on the southern frontier facing the Tatars, in 1649 no more than 38 percent carried firearms while the rest relied on bows. Later in the century, the old-style cavalry grew even less effective. During a muster in 1663, many of the hereditary servicemen even lacked horses.[27] And in the 1670s, after the Deluge, 75 to 90 percent of the old-style cavalrymen were armed with only pistols and sabres.[28]

The hereditary servicemen suffered enormous losses during the campaigns of the Deluge. In 1659, a Muscovite army under Prince Aleksey Trubetskoy (1600–1680) and his lieutenant, Prince Grigoriy Romodanovskiy (d. 1682), suffered severe losses in the battle of Konotop. Of 4,769 Muscovite soldiers known to have been lost in the battle and its aftermath, almost half (2,276 men, including 243 of Moscow rank) were hereditary servicemen.[29] This meant that almost a tenth of the men then available to the Sovereign's Division were lost, with a similar percentage lost of the old-style cavalry in general. This was the largest loss suffered by the Moscow elite in any battle during the war. Yet, the attrition continued, and multiplied as the war went on. As a result, the old-style cavalry gradually lost much of its former importance.

Streltsy

The streltsy consisted of infantry matchlockmen or musketeers, of a type introduced in the previous century following Ottoman influences and intended as standing infantry units. Being contract servicemen, they lived in separate neighbourhoods within the towns. At regular intervals, the streltsy engaged in unit training of sorts (usually shooting contests), and each regiment had its integral artillery, consisting of from six to eight cannons. Unlike the old-style cavalry, the streltsy were uniformly armed and clothed, since they received their arms and equipment from the state. Moscow streltsy received an annual subsidy in the form of cloth for their uniform (provincial streltsy only received this stipend every third or fourth year).[30] As a result, a streltsy regiment would present a uniformed appearance. As daily dress, the Moscow streltsy wore heel-length caftans made of grey, black, or brown cloth with wide sleeves that narrowed at the wrist. They also wore hats, trimmed with fur, and the usual Muscovite boots. Some Moscow streltsy also had a full-dress uniform consisting of a similar but better quality caftan of red cloth with gilded braiding on the chest, together with a whitish belt and heeled boots with turned-up toes.

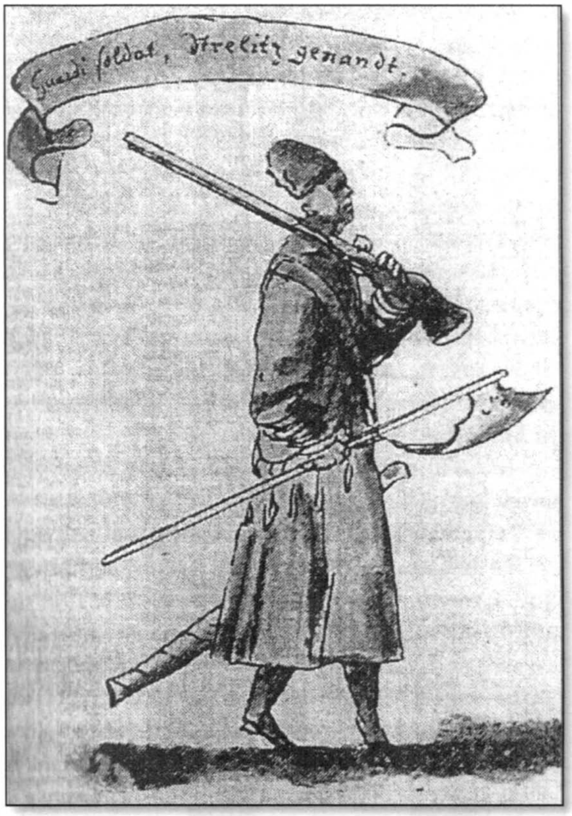
---

[27] Hellie, *Enserfment and Military Change*, pp.211–12.

[28] *Ibid.*, p.219.

[29] Igor' B. Babulin, *Bitva pod Konotopom, 28 iyunya 1659 goda* (Moscow: Zeughaus, 2009), p.37.

[30] Cotossichin, *Beskrifning*, pp.80, 95, 96.


Guardi ſoldat, Strelitz genandt.

Above: Strelets, 1661. (Augustin von Mayerberg Album)

Overleaf: Fine-calibre rifled snaplock hunting gun, made for Tsar Alexis in 1654 by master gunsmith Grigoriy Vyatkin. Although still primarily used for hunting purposes, rifled muskets were growing common among some groups, including the better-off cossacks.

Streltsy were divided according to their garrison town into 'selected' (*vybornoye*) streltsy, also known as Moscow-ranked, and town streltsy (*gorodovoye*), stationed elsewhere. In times of peace, the streltsy served in garrisons or as part of the border defensive lines. At war, both Moscow and town streltsy participated in campaigns and battles. The streltsy were administrated by a special government office (*Streletskiy prikaz*) commanded by a voivode. Local streltsy units were raised as needed, even by monasteries.

The traditional main armament of the streltsy was the matchlock musket, described in the late sixteenth century by Giles Fletcher as 'with a plain and straight stock, somewhat like a fowling piece; the barrel is rudely and unartifically made, very heavy, yet shootheth but a very small bullet.'[31] The calibre was indeed often small, the muskets varying in calibre from 14 mm to 18 mm. Already by 1637, however, the Muscovites used flintlocks on a large scale, and a large distribution of flintlock muskets was made in 1651. By then, only some of the streltsy retained the traditional matchlocks, and even they did so only until the 1670s. Even provincial hereditary servicemen and cossacks rearmed with flintlock muskets.[32] The specific type of flintlock seems uncertain, since few early seventeenth-century Muscovite flintlocks remain. Possibly, the lock was of the snaplock or snaphance type. By the early 1650s, large numbers of modern firearms were also imported from Sweden, the Netherlands, England, France, and the Ottoman Empire.[33] In 1654, the Tsar requested 20,000 muskets from Sweden (this was too steep an order to be delivered at once, but in summer the Tsar received 4,000 as a first instalment, and he was offered other weapons, helmets, and cuirasses as well).[34] Incidentally, the introduction of the flintlock, even though it chiefly was used by infantry, also facilitated the introduction of firearms to the cavalry, in the form of flintlock carbines and pistols. The flintlock was easier for cavalrymen to use than the old matchlock and far cheaper to manufacture than the complicated wheellock.

In addition to his musket, the strelet carried a sabre and a *berdysh* (perhaps derived from Polish *berdysz*), a pole-axe with a 40 to 100 cm long head mounted on a pole. It was used as a musket rest as well as for hand-to-hand combat, in particular against horsemen. The berdysh remained common throughout the seventeenth century. When not in use, the weapon

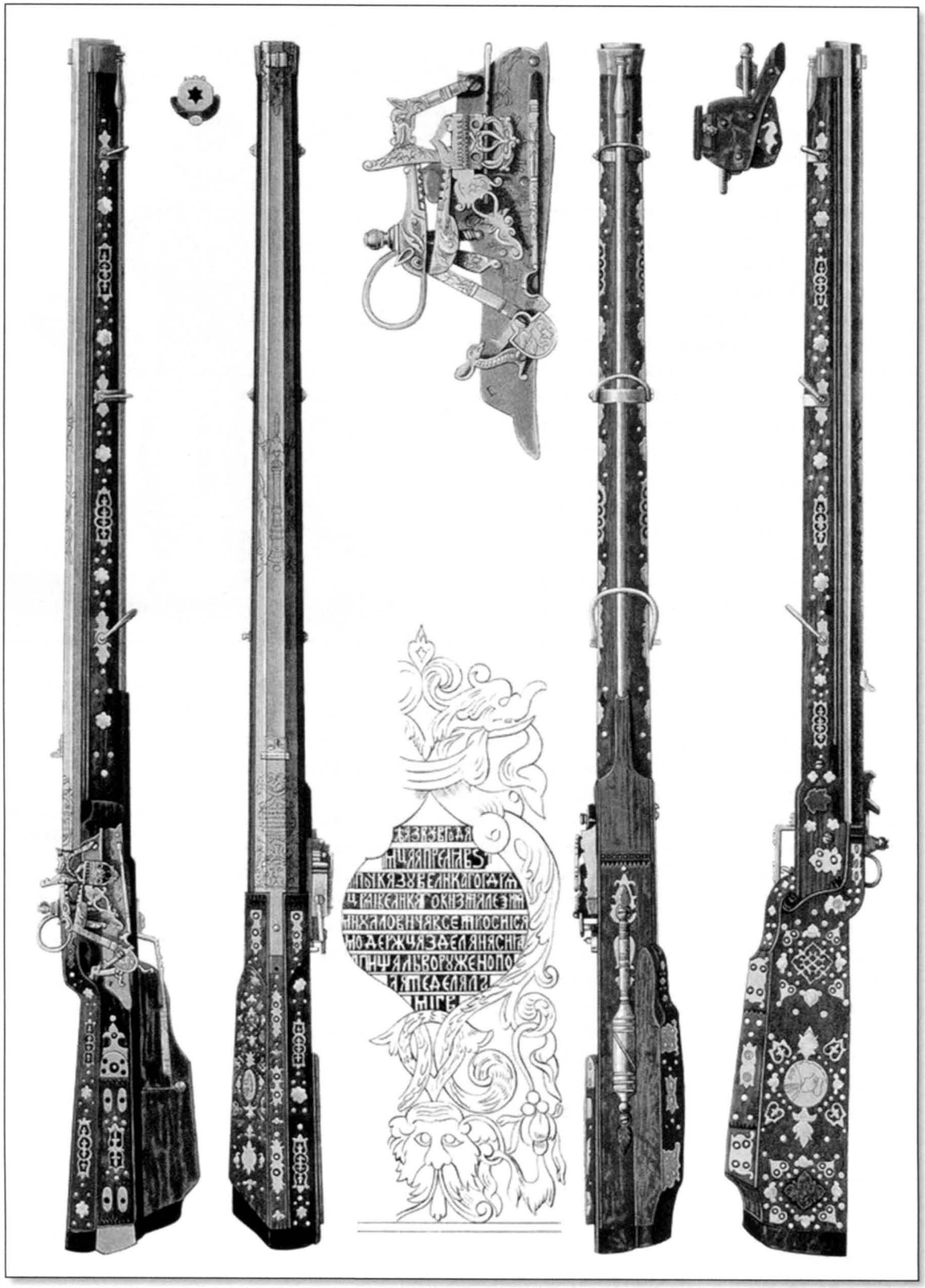
---

[31] Giles Fletcher, *Of the Russian Commonwealth* (1591), in Berry and Crummey, *Rude & Barbarous Kingdom*, p.184.

[32] Hellie, *Enserfment and Military Change*, pp.181, 204.

[33] *Ibid.*, p.183.

[34] Hedberg, *Kungl. Artilleriet: Carl X Gustafs tid*, p.33.



was carried slung in a shoulder-loop, or, according to Giles Fletcher who saw them in the late sixteenth century, fixed on each soldier 'at his back' which some have interpreted as thrust through the belt on the man's back.[35]

By 1659, the Muscovite army included 24 Moscow-ranked streltsy regiments. The mounted streltsy regiment (*stremyannoy prikaz*), the name taken from 'streltsy at the stirrup' (*stremyannyye strel'tsy*), who were supposed to follow the Tsar on horseback but stay at his side, fighting dismounted, consisted of 1,500 men. The other regiments consisted of 600 to 1,000 men.[36]

Town Cossacks

Since the sixteenth century, there were two main categories of cossacks in the Muscovite army: town or service cossacks and free cossacks (more on which below). The town cossacks were voluntary recruits who served as infantry in exchange for payment. In the army, they were regarded as holding a position below that of streltsy and artillerymen. They were paid in a similar way, receiving some cash and provisions but also a little collective land so that they could sustain their families. Like streltsy and artillerymen, they were settled in towns in their own distinct neighbourhood. A town cossack unit was headed by a headman (*golova*). His unit was subdivided into hundreds, and further on, into tens. Town cossacks could be mustered for both town and campaign duty. But there were also wealthy cossacks who instead served as cavalrymen and, as a result, might receive a personal land grant, in effect becoming a hereditary serviceman. They were not many, by the turn of the seventeenth century constituting no more than 12 to 15 percent of all service cossacks.[37]

Although important especially along the borders, the number of town or service cossacks was never great. The Novgorod Army included a few hundred town cossacks, who served as infantry in the campaigns against Lithuania and Sweden.[38] Their military role and organisation changed little until they ultimately lost their military usefulness and were enlisted into the new formation regiments, during the military reforms of the 1680s if not already before.

In winter, Muscovite infantry at times was issued skis. During the Deluge, ski troops were particularly effective against Commonwealth cavalry, since the latter had difficulty moving when the ground was covered in deep snow, with the uppermost layer frozen into ice, a phenomenon which frequently occurred on sunny winter days when the uppermost layer of snow first melted, then refroze at sunset.[39] In the north, skis were used by both Muscovite and Swedish troops, including against each other.

---

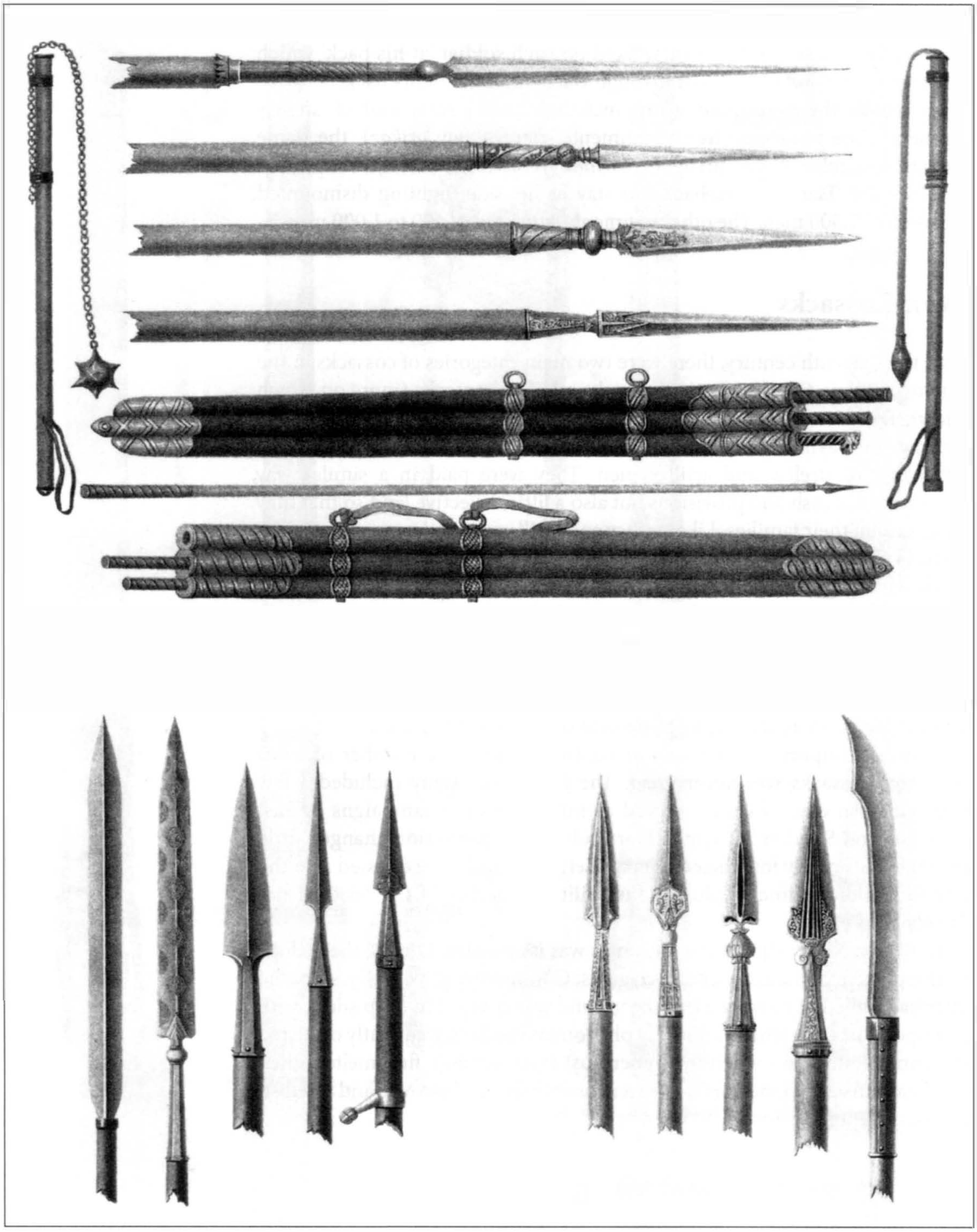
[35] *Ibid.*, p.184.

[36] Babulin, *Bor'ba za Ukrainu*, p.75.

[37] Chernov, *Vooruzhennye sily*, ch. 4.

[38] Oleg Aleksandrovich Kurbatov, *Iz istorii voyennykh reform v Rossiivo 2-y polovine XVII veka: Reorganizatsiya konnitsy na materialakh Novgorodskogo razryada 1650-kh–1660-kh gg.* (dissertation, Moscow, 2002), pp.74–9, 239–43 (Table 4.1).

[39] Hellie, *Enserfment and Military Change*, p.197.



Muscovite *djid* set of darts or javelins, bear spears (*rogatiny*), and polearms. (Aleksandr Viskovatov, 1841)

New Formation Infantry

During the Thirty Years' War, Muscovy had been one of few foreign powers which supported the Swedish cause. In return, Swedish King Gustavus Adolphus had assisted Tsar Michael Romanov in modernising the Muscovite army by sending officers for the Tsar's new formation regiments which were first set up in 1630. The new units had been trained in the Continental or, to be more specific, Swedish model of warfare.[40]

The first new formation units consisted of infantry regiments (*soldatskiye polki,* so named after the word *soldat,* pl. *soldaty,* meaning soldier). Each regiment consisted of 1,600 men in eight companies (*rota,* pl. *roty*) under 176 officers. There were also musicians, drummers, and so on. Most companies consisted only of musketeers. However, there were also mixed companies, each of which included 120 musketeers and 80 pikemen (in Russian known as 'spearmen'; *kopeyshchiki*).[41] Some companies were armed only with pikes, about 3.5 metres long. The pike companies were regarded as the best of the regiment.[42] There was also an attached regimental artillery unit of two to seven light cannon.[43] The regiments included dedicated blacksmiths, carpenters, physicians, and apothecaries.[44]

The new formation infantry (like the new formation dragoons which were regarded as infantry) were treated as contract servicemen. Many held land, for peacetime income, but this was in most cases a parcel (*nadel,* pl. *nadely*) of land held as the collective property of all personnel serving in a particular unit. They became soldier-service landholders (*soldaty-pomeshchiki*). They were not permitted to lay claim to hereditary status, nor were they formally initiated as the hereditary servicemen were. As for supplies while on campaign, contract servicemen, unlike hereditary servicemen, received money for food purchases. On campaign, supply wagons followed the army so that the men with cash allowances could purchase food.

The infantry in some ways had it easier than the cavalry. Unlike the hereditary servicemen, who had to provide for themselves, the contract servicemen and infantry received both arms and money for food while on campaign.

In the new formation regiments, organisation, arms, equipment, and tactics aimed to follow Continental standards. This, however, did not necessarily apply to uniforms. Most Muscovite infantry, unlike those foreign officers who served in Muscovite units, seem to have dressed similarly to the streltsy, in caftans and boots.[45] Soldiers were armed with muskets, rapiers or sabres, berdyshes, long and short pikes, hand grenades, and, in some cases (the pikemen in particular), European half-armour. In winter they received fur coats.[46] Regimental colonels only carried a sabre and, perhaps, a pistol or two. Other high-level officers often carried a partisan (*protazan*), which was a broad ornamental spear, decorated with a tassel. When not in use, the partisan's head was protected by an elaborate cloth cover (*kutasa*, pl. *kutasy*) of the type that also was used as a cover for the officer's personal pennon (*prapor*).[47] The cloth cover, when mounted on a partisan or pennon, may have been used as a sign for the commander's quarters while in camp.[48] Lower-level officers instead carried an ornamental halberd.[49]

---

[40] B.F. Porshnev, *Muscovy and Sweden in the Thirty Years' War, 1630–1635* (Cambridge: Cambridge University Press, 1995), pp.82–3, 162; Fredholm von Essen, *Muscovy's Soldiers*, pp.2, 88–94; Fredholm von Essen, *Lion from the North*, vol. 1, pp.59, 222; Fredholm von Essen, *Lion from the North* , vol. 2, p.225.

[41] Chernov, *Vooruzhennye sily*, ch. 5.

[42] Belyayev, *O russkom voyske*, p.61.

[43] Chernov, *Vooruzhennye sily*, ch. 6.

[44] Stevens, *Soldiers on the Steppe*, p.117.

[45] Aleksandr Malov, 'Russkaya pekhota XVII veka: Gosudarevo zhalovan'ye-sluzhiloye plat'ye', *Zeughaus* 17 (2002), pp.10–16; Aleksandr Malov, 'Gosudarev vybornyy polk Aggeya Shepeleva:

On the outbreak of war in 1654, there were no standing new formation regiments, since the original ones had demobilised long ago. This did not prevent the raising of several such regiments, including of infantry, although most demobilised come winter. A step towards standing regiments was taken in 1656–1657, when two new formation infantry regiments were raised that became known as the 'selected regiments' (*vybornyye polki*). The men selected for the first of these regiments were already trained soldiers and sergeants who had combat experience from at least two campaigns. The regiment was envisioned as being larger than others, with a planned strength of 2,000 men, divided into 20 companies. As colonel of the first selected regiment was appointed Aggey Alekseyev syn Shepelyov, who went on to command the regiment from 1656 to 1687. Shepelyov's regiment was fully raised in late 1657. Yet, even in this regiment, the majority of the rank and file demobilised during winter.[50] As before, Muscovy lacked the means to fund the army it needed.

The second selected regiment was recruited in the same period, only slightly later, and was headed by Colonel Yakov Maksimov syn Kolyubakin (d. 1661). Unlike the first selected regiment, it was manned with fresh recruits, many of them peasants. It was for this reason not referred to as a selected regiment from the outset; however, it was called a 'court' (*dvortsovyy*) regiment and received its supplies through the Tsar's privy chancellery (*Prikaz taynykh del*) so presumably enjoyed the status of a Moscow-ranked regiment. It became known as a selected regiment in 1659. The second selected regiment was settled in Butyrki, a Moscow suburb, after which it eventually was named,

---

Pervoye soldatskoye sluzhiloye plat'ye', *Zeughaus* 20 (2002), pp.10–13; Aleksandr Malov, 'Garnizon Borisoglebskoy kreposti: Gosudarevo sluzhiloye plat'ye, 1666', *Zeughaus* 21 (2003), pp.3–7.

[46] Belyayev, *O russkom voyske*, pp.59–60, 61, 62; Hellie, *Enserfment and Military Change*, p.196; Malov, 'Russkaya pekhota XVII veka: Gosudarevo zhalovan'ye-sluzhiloye plat'ye', pp.10–16.

[47] Several have been preserved in the Army Museum, Stockholm. For illustrations, see Vladimir Velikanov, '"Salatskiye trofei": Polkovoye imushchestvo streletskikh polkov Nechayeva i Protopopova, poteryannoye v srazheniipri Salatakh, 1703', *Zeughaus* 52 (2013) : pp.3–13, on p.13.

[48] This was the traditional interpretation of their function in Sweden, which appears to have been based on the Muscovite use of drum cloth covers for the same purpose (see below).

[49] Hellie, *Enserfment and Military Change*, p.191.

[50] Aleksandr Malov, 'Gosudarevy vybornyye Moskovskiye polki soldatskogo stroya: Kratkiy ocherk istorii i organizatsii', *Zeughaus* 13 (2001), pp.2–7, on pp.3–5; Aleksandr Malov, 'Gosudarevy vybornyye Moskovskiye polki soldatskogo stroya: Komandiry vybornykh polkov', *Zeughaus* 14 (2001), pp.2–7, on pp.4, 5, 6.

becoming known as the Butyrsk Regiment. Following Kolyubakin's death in battle in 1661, he was replaced as colonel by Matvey Osipovich Krovkov in the same year.[51]

In the early 1660s, both the first and second selected regiments grew in size, first to 3,000, then to 5,000 and possibly even 6,000 men.[52]

Armament followed what was customary for the new formation regiments. The men were armed with muskets and pikes. However, they were also issued helmets, rapiers or sabres, and even occasionally the old berdysh.[53]

Like the streltsy, the selected regiments wore uniforms. In the period 1658–1660, the various companies within the two regiments wore differently coloured caftans: red, green, blue, and yellow, respectively.[54] From 1658, the men of the second selected regiment appear to have been issued green, red, and pink hats, while raspberry red and brown caftans followed in 1660. It is possible that the rank and file within the first 'thousand' of the second selected regiment wore brown caftans while sergeants wore raspberry red caftans, while in the second 'thousand' of the same regiment, the rank and file wore raspberry red and sergeants brown.[55] At least this corresponds to the known practice within the first selected regiment, in which within each given company, the sergeants wore caftans of a different colour from those of the rank and file. For instance, in 1661 the rank and file within the first 'thousand' of the first selected regiment wore green caftans while sergeants wore blue caftans, while in the second 'thousand' of the same regiment, the rank and file wore blue and sergeants green.[56]

By the summer of 1659, the Muscovite army included 32 new formation infantry regiments (including the two selected regiments).[57]

New Formation Cavalry

Following the introduction during the Thirty Years' War of new formation infantry, Muscovy also introduced new formation cavalry regiments (*reytarskiye polki*). These were styled on the German Reiter type of cavalryman armed with pistols and carbine. As we have seen, both Muscovy and the Commonwealth referred to their German-style cavalry as reiters.

---

[51] Malov, 'Gosudarevy vybornyye Moskovskiye polki soldatskogo stroya: Kratkiy ocherk', pp.3–5; Malov, 'Gosudare vyvybornyye Moskovskiye polki soldatskogo stroya: Komandiry', pp.4, 5, 6. Incidentally, in 1687 Patrick Gordon (1635–1699), a Scotsman in Muscovite service who during the Deluge fought in both the Swedish and Commonwealth armies, became colonel of the Butyrsk Regiment.

[52] Erik Palmquist, *Några observationer angående Ryssland, sammanfattade av Erik Palmquist år 1674* (Moscow: Lomonosov, 2012), p.229.

[53] Roberto Palacios-Fernandez, 'O proiskhozhdenii tsvetov petrovskoy leyb-gvardii', *Zeughaus* 5 (1996), pp.4–7; Malov, 'Gosudarev vybornyy polk Aggeya Shepeleva', pp.10–13.

[54] Palacios-Fernandez, 'O proiskhozhdenii', pp.4–7; Malov, 'Gosudarev vybornyy polk Aggeya Shepeleva', pp.10–13.

[55] Aleksandr Malov, 'Gosudarevo sluzhiloye plat'ye Vtorogo vybornogo polka v kontse 1650-kh–nachale 1660-kh gg.', *Zeughaus* 24 (2007) : pp.5–7.

[56] Aleksandr Malov, 'Gosudarevo sluzhiloye plat'ye Pervogo vybornogo polka 1661 g', *Zeughaus* 22 (2006), pp.6–9.

[57] Babulin, *Bor'ba za Ukrainu*, p.73.

Reiters were pistoleers protected by a lobster-tailed pot helmet of the originally Inner Asian type (Russian: *shishak*; corresponding to Polish *szyszak* and German *zischägge*) and, at first, half-armour (*laty*; plate armour covering the upper body and, possibly, arms). Following Swedish tactical doctrine, Muscovy usually attached 400 dragoons to the reiter regiment as a means to provide infantry support.[58]

The new formation cavalry (but not the dragoons, which as noted were regarded as infantry) was essentially treated like the old-style cavalry. Reiters were generally of hereditary service origin, so could aspire to receiving land grants and were expected to provide for themselves while on campaign duty, including arranging for a horse, weapons, armour, food, and fodder. Each soldier of the new formation cavalry was accordingly expected to equip himself, at his own expense, in the same way as the old-style cavalry. Each reiter was required to muster with a horse, musket (later carbine), a pair of pistols, rapier or sabre, half-armour, and helmet.[59] The reiters wore Muscovite dress – caftan and boots – under their Western-style cuirass.[60]

The focus was on new organisation and armaments, not retraining, so the difference between a reiter and an old-style cavalryman might, at first, not have been that great.[61] Moreover, service in a reiter regiment was less prestigious than service in the old-style cavalry. For this reason, reiter service was unpopular among the hereditary servicemen, and the first reiter regiments of the 1630s were disbanded when the country was at peace. However, in 1647 a Dutch officer, Isaac van Bokhoven, together with several others went into Muscovite service. Among his first tasks, in 1648–1649, was to create a new formation reiter regiment of 2,000 men.[62] In 1653 the men in Bokhoven's regiment were used to raise six new regiments, each of 1,000 men.[63] Yet more were raised during the subsequent war. Henceforth, a reiter regiment consisted of 1,000 men, divided into 10 companies, with from 30 to 40 officers per regiment. This organisation was retained according to a decree of 1660. The company was subdivided into three corporalships (each known as a *kapral'stvo*), with each corporalship led by a non-commissioned officer.[64] The cavalrymen were armed as before, with pistols, carbine, rapier or more commonly a sabre, and helmet. The men wore armour, but a breastplate and backplate instead of the obsolete half-armour.

There is little remaining information on how the Muscovite reiter cavalry actually fought in battle. However, considering that even these Muscovite units in most cases were not standing forces, and that there was little unit training except when called up for duty, it is unlikely that they relied on complicated unit tactics or formations.

---

[58] Chernov, *Vooruzhennye sily*, ch. 5.

[59] Belyayev, *O russkom voyske*, p.38, Chernov, *Vooruzhennye sily*, ch. 5; Hellie, *Enserfment and Military Change*, p.199.

[60] Babulin, *Bitva pod Konotopom*, p.14.

[61] Stevens, *Russia's Wars of Emergence*, p.132.

[62] Chernov, *Vooruzhennye sily*, ch. 5; Hellie, *Enserfment and Military Change*, p.198.

[63] For an excellent summary, see Vladimir Velikanov, 'Russian Reitar Regiments Raised in 1654', *Oderint dum probent* blog, <www.rusmilhist.blogspot.com/2011/09/russian-reitar-regiments-raised-in-1654.html>.

[64] Chernov, *Vooruzhennye sily*, ch. 5, p.147.

New Formation Dragoons

The new formation units also included dragoon regiments (*dragunskiye polki*), consisting of mounted soldiers who were cheap to raise since they were regarded as infantry and primarily fought on foot, even though they moved on horseback.

The first dragoon regiments had an establishment strength of 1,440 men, divided into 12 companies each of 120 men, and 136 officers.[65] From 1642 to 1648, yet more dragoon regiments were raised in the south, including by Tsar Alexis. At first armed with muskets like infantry, they were expected, indeed had to dismount to fire. By the time of the Deluge, many had rearmed with carbines. Each dragoon was also armed with a rapier or sabre, an axe, or berdysh. They were considered the lowest priority new formation troops and were mainly raised in the south where they essentially served as a kind of frontier troops.[66] By the summer of 1659, the Muscovite army included 10 dragoon regiments.[67]

Hussars

The hussars (*gusary*) were the last type of new formation cavalry to be formed in Muscovy. Styled on the famous Polish winged hussars, who on several occasions had been used with devastating effect against Muscovite units, the Muscovite hussars, too, were armed with long lances and pistols.

All hussars were well-off hereditary servicemen or boyars. Only raised in the north-western towns, hussars were never used on the southern border, where their function was carried out by similarly armed but less distinguished troops merely known as lancers. The first hussar regiment was raised in autumn 1653.[68] In spring 1654, it consisted of 1,000 men and was commanded by a former Lithuanian noble, Khristofor Ryl'skiy, who had been in Muscovite service for more than 20 years. However, the Muscovites found it more difficult to train hussars than reiters, so the unit was dissolved already in spring 1655.[69]

In similarity to Commonwealth hussars, Muscovite hussars were armed with lance (*drevko*), sabre, palash, and a pair of pistols. Since there were never many hussars, some uncertainty remains with regard to their arms and equipment. Their lances were also known as 'hussar lances' (*gusarskiye kopeytsy*), which implies that they were slightly different from other cavalry lances. It would seem likely that hussar lances were longer than those used by other cavalrymen; however, the actual term employed was a diminutive form of the word for spear, which implies that the hussar lance instead was of smaller dimension than others, which presumably meant light in weight. Likewise, their armour was reportedly lighter than those used by the reiters. On the other hand, a hussar wore lower arm defences (vambraces, *naruchi*), which many reiters lacked.

---

[65] Chernov, *Vooruzhennye sily*, ch. 5; Davies, *Warfare, State and Society*, pp.71–2.

[66] Hellie, *Enserfment and Military Change*, p.200.

[67] Babulin, *Bor'ba za Ukrainu*, p.73.

[68] That is, earlier than described in Fredholm von Essen, *Muscovy's Soldiers*, p.91.

[69] Babulin, *Smolenskiy pokhod*, p.26. It has been suggested that Lithuanian nobles such as Ryl'skiy established hussar companies for the Muscovite army already during the Smolensk War of 1632–1634. Oleg Aleksandrovich Kurbatov, *Iz istorii voyennykh reform v Rossiivo 2-y polovine XVII veka: Reorganizatsiya konnitsy na materialakh Novgorodskogo razryada 1650-kh–1660-kh gg.* (dissertation, Moscow, 2002), p.114.

Lancers

Since the hussars were so few, similarly armed but less-elite units were formed elsewhere for the role of shock cavalry. Reiter and dragoon regiments included special lancer companies made up of cavalrymen known as 'spearmen' (*kopeyshchiki*) or, in foreign terminology, lancers. Lancers were first introduced in the south. Armed with lance, sabre, and a pair of pistols, the first such company was formed no later than 1657 when it was referred to as a 'company armed with spear, in hussar formation' (*kopeynaya rota gusarskogo stroya*).[70] Some reiter companies appear to have counted two-thirds reiters and one-third lancers. By October 1658, there were also independent lancer–reiter regiments, consisting of two squadrons each constituted of five lancer companies and a single reiter company. In the spring of 1661, the Belgorod Army, which protected Muscovy's southern border, contained a lancer regiment consisting of 10 companies under the command of Leontiy Kopnin. In 1662, two regiments of lancers existed within the Belgorod Army. We do not really know if they operated as shock cavalry, since they carried pistols just like the reiters.[71]

Cossacks

Muscovy regularly solicited the services of the free cossacks who lived along the Don, Volga, and Dnieper rivers. Since these technically were not subjects of the Tsar, and accordingly neither servicemen nor taxpayers, relations with them were increasingly often handled by the ambassadors' chancellery (*Posol'skiy prikaz*), which functioned as Muscovy's foreign ministry.[72] Free cossack units were frequently hired to serve in the southern steppes, in particular as a defence against Tatar raids. Muscovy paid money, weapons, cloth, and grain in return for their support in protecting the border. Cossacks served as either infantry or cavalry under their own leaders, mostly known under the title *ataman*. The leader organised his band into a retinue (*druzhina*). Cossacks provided light cavalry, but because of their experience with river craft, they also served as boatmen and naval infantry on the rivers and great lakes in the north. Relations between Muscovy and the free cossacks were always somewhat tense, however. This became particularly evident during the Deluge, when the issue of the Ukrainian cossack insurgency was the immediate cause of war.

---

[70] Aleksandr Vasil'yevich Viskovatov, *Istoricheskoye opisaniye odezhdy i vooruzheniya rossiyskikh"voysk"*, vol. 1 (St. Petersburg: Voyennaya tipografiya, 1841), p.100; Chernov, *Vooruzhennye sily*, ch. 5; Hellie, *Enserfment and Military Change*, p.199.

[71] Chernov, *Vooruzhennye sily*, pp.147–8; Babulin, *Bor'ba za Ukrainu*, pp.72–3.

[72] Belyayev, *O russkom voyske*, p.17.

Nonetheless, Don cossacks in particular frequently participated in Muscovite wars. Don cossack units took part in all major campaigns, including in the Novgorod Army which operated in northern Lithuania and, against the Swedes, in Livonia, Ingria, Estonia, Kexholm County, and Finland.[73]

Kalmyks

Developments in the east continued to influence and indeed improve the capability of the Muscovite army. From 1644 onwards, the first bands of Kalmyks (western Mongols) appeared in the River Terek region, having migrated from the eastern Eurasian steppes. The western Mongols (Oirat, 'confederates', as they called themselves, or as the Turks and accordingly the Muscovites named them, Kalmyks) were traditionally based far to the east, near the uppermost Yenisey south of modern-day Tuva. The Kalmyks raided both in the Caucasus and in lands held by Muscovy. The first Kalmyk intrusion was beaten off by an alliance between Kabardians in the Caucasus and Noghai Tatars, but already in 1645, the Kalmyk *taishi* (prince), Daichin, entered negotiations with Muscovy on an alliance in exchange for grazing right on the steppe between the lower Volga and the Yaik (Ural) Rivers. The Kalmyks were at the time being pushed out of their eastern territories, thus moving west in increasing numbers. Daichin offered the support of his 20,000 Mongols. By 1650, Muscovy entered into an alliance with the Kalmyks against the Crimean Khanate. From 1655 onwards, when Muscovy for strategic reasons offered protection to the Kalmyks and grazing rights along the eastern bank of the Volga as far as Tsaritsyn and along its western bank as far as Samara, relations between North Caucasians and Kalmyks improved as well. Henceforth, Kalmyks regularly contributed a cavalry force of several thousand when Muscovy went to war against the Crimean Tatars. Kalmyks also occasionally appeared as powerful allies to those Circassians who supported Muscovy, again primarily against the Crimean Khanate.[74] The Kalmyk cavalry proved particularly useful to Muscovy against the Noghai Tatars in the North Caucasus from 1659 until the summer of 1661, against the Crimean Tatars on the Pontic from autumn 1661 to 1663, and in the Ukraine from 1664 to 1667.[75] The Kalmyks would field up to 5,000 men for campaigns against the Tatars.[76] In the 1660s, reportedly up to 20,000 Kalmyks supported Muscovy in the Ukraine.[77]

---

[73] Kurbatov, *Iz istorii voyennykh reform*, pp.79–84.

[74] Kasbolat Fitsevich Dzamikhov, *Adygi (cherkesy) v politike Rossii na Kavkaze (1550-e – nachalo 1770-kh gg.)* (Nal'chik: State University of Kabardino-Balkaria, 2001), ch. 7.2.1; Davies, *Warfare, State and Society*, p.95.

What distinguished the Kalmyks from most Crimean Tatars and cossacks was that they still operated as armoured lancers who functioned as heavy shock cavalry, a fighting style which the Crimeans had abandoned.[78] Moreover, the Kalmyks carried their own integral firepower capability. The Kalmyk cavalryman commonly carried a Mongol-type matchlock musket with an attached forked, A-shaped rest. Inner Asian muskets were often so long that typically, such a rest was attached to the stock for greater ease in firing. This rest, about 0.5 m long, was pivoted to a projection on the lower side of the stock. Many Kalmyk nobles were crack shots, since this was a skill useful in hunting, even though the traditional composite bow remained in widespread use and indeed was regarded as the more dangerous weapon. Somehow, some Kalmyks even learnt how to fire the matchlock from horseback while at full gallop, in a similar way to the bow.

It was not unusual to see Kalmyks armed with both spear, matchlock (carried slung on the back, or between the saddle and the horse, under one's leg), sword, and composite bow. Many wore a chainmail and plate cuirass over a quilted coat, a helmet of traditional Mongol design, and vambraces. Others depended on a quilted coat, or brigandine armour (*kuyak*), a garment of cloth or leather reinforced with metal plates from both sides, of the type commonly used by Mongols and adopted from them by the Muscovites. The Kalmyk for obvious reasons rode in the Mongol style, with short stirrups and the customary short whip to control his horse.

Artillery

Muscovy had early on developed a strong artillery, and cannons was a particular Muscovite strength. The mid seventeenth century saw further improvements. We have already seen that modern field artillery formed an integral part of the new formation infantry regiments. From the end of the 1650s to the early 1660s, the Muscovite artillery developed further. Attempts were made to unify and standardise different calibres and types of cannon.[79] The ongoing war was a powerful motivator for this, but most results only appeared after the war. Nonetheless, the existing artillery system was still quite good in comparison to most enemies which Muscovy fought.

---

[75] Leonid Bobrov, 'Kalmytskaya konnitsa v Russko-pol'skoyvoyne 1654–1667 gg.: Vooruzheniye, taktika, voyennaya strategiya', *Zbroyeznav* 2014, pp.47–63.

[76] V.T. Tepkeyev, '"Ot nego, krymskogo khana, pravdy i postoyanstva net": Nabegi kalmytskikh otryadov na Krym vo vremya Russko-pol'skoy voyny 1654–1667 rr.', *Novyy istoricheskiy vestnik* 4 (38) (2013), pp.9–28, on p.14.

[77] Bobrov, 'Kalmytskaya konnitsa', p.52.

[78] *Ibid.*, pp.47–63; Leonid A. Bobrov, Amet-han A. Sheykhumerov, and Alexey V. Salnikov, 'Stabbing Long-Shafted Pole Weapons of the Crimean Tatars and Nogais in 1440s–1650s: According to the Written Sources', *Bylyye Gody* 49: 3 (2018), pp.884–914.

[79] Babulin, *Bor'ba za Ukrainu*, p.76.

Levies

Muscovy did not generally rely on levies in offensive warfare. However, on the border with Sweden special units were set up during the war consisting of those Orthodox peasants who for one reason or another had moved from Swedish territories into Muscovy. Especially in Ingria and Kexholm County, these units occasionally played a major role in the war, since they knew the enemy territory and were highly motivated, in particular when it came to looting Lutheran churches and settlements.

Banners and Music

Each regiment had its own banner, made of silk damask, unpatterned silk, or cloth of taffeta, with sewn on or painted ornaments. Most common ornaments were the six-armed Orthodox cross and biblical scenes, the image of Christ, the Virgin Mary and the Holy Child, a saint such as the Archangel Michael, or even a multitude of saints with their hands extended in prayer. These images often appeared in combination. The sun, moon, stars, and other ornaments were common, too. Infantry regimental colours were large, 1.5 to 2.5 m in breadth, and highly decorated.[80] Many Muscovite colours bore the toothed saltire or Burgundian cross, which presumably was introduced by officers from western Europe. Flags used by companies and lesser units were normally of single-colour fabric with an Orthodox cross of differently coloured fabric on the upper left corner, with one or more stars elsewhere on the field corresponding to the company's number.[81]

Dragoon guidons were square in shape with swallowtails and half the size of the colours used by infantry regiments. Reiter standards were square but had no swallowtails and were even smaller than those used by dragoons.[82] The old-style cavalry, too, carried smaller standards, approximately 1.3 m in breadth and length.[83]

Many standards were mounted on staves with a finial on top and a wooden apple immediately below the standard.[84]

---

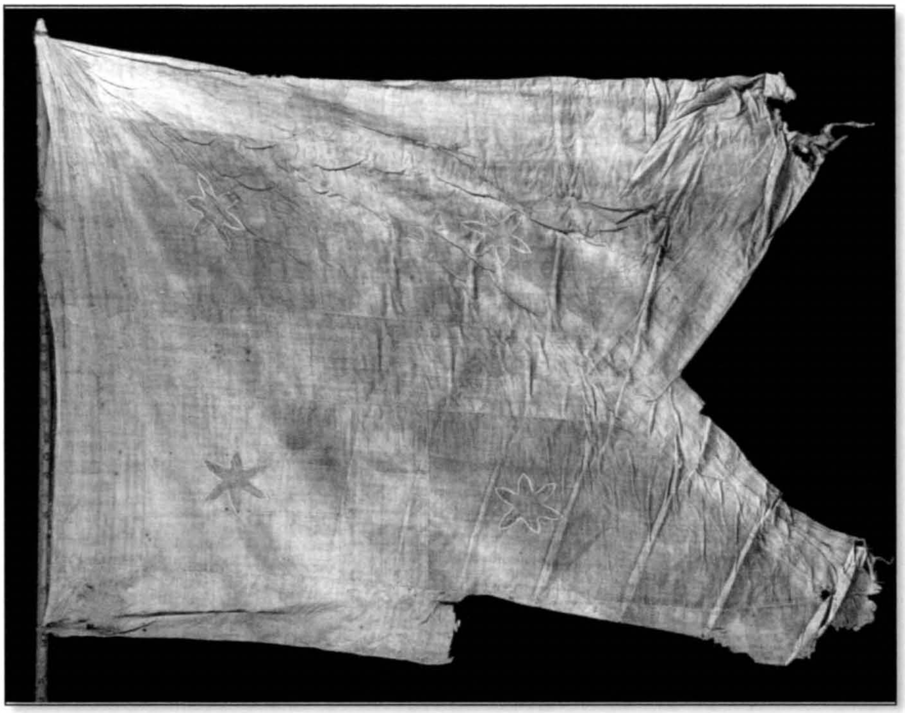
[80] Many have been preserved in the Army Museum, Stockholm. Arne Danielsson, 'Utländska fälttecken utställda i Trofékammaren', *Meddelande från Kungl. Armémuseum* XXV (Stockholm: Kungl. Armémuseum, 1964); Arne Danielsson, *Catalogue of Foreign Colours, Standards, Guidons Exhibited in the Trophy Room of the Royal Army Museum, Stockholm*, n.d.

[81] Aleksandr Malov, 'Znamena polkov novogo stroya', *Zeughaus* 15 (2001), pp.6–10; Aleksandr Malov, 'Znamena polkov novogo stroya: Simvolika kresta', *Zeughaus* 16 (2001), pp.2–7.

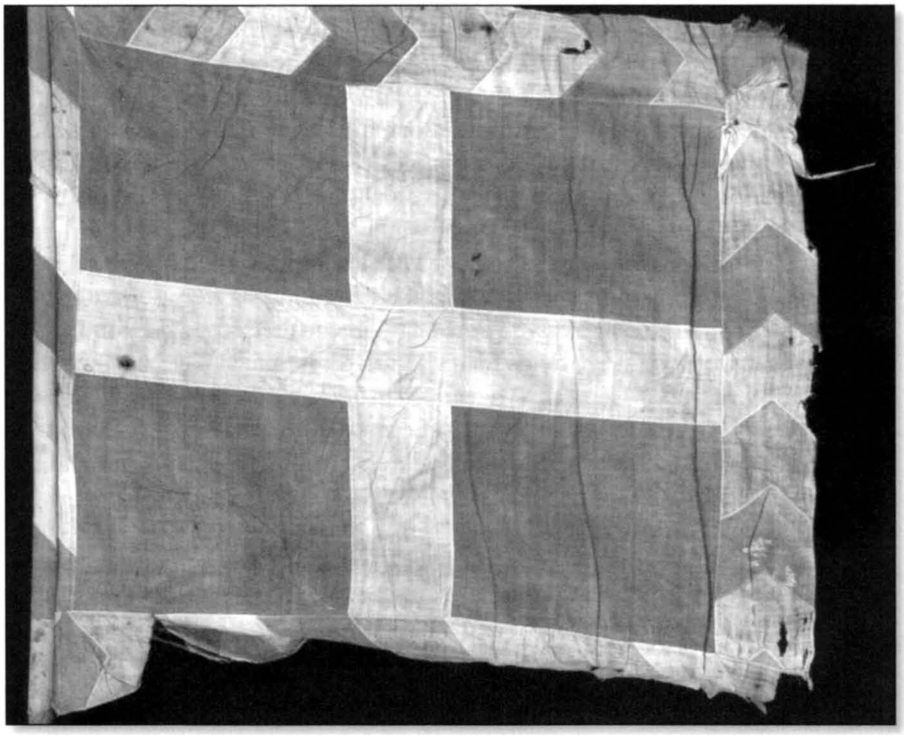
[82] Malov, 'Znamena polkov novogo stroya', pp.6–10; Malov, 'Znamena polkov novogo stroya: Simvolika', pp.2–7.

[83] Several have been preserved in the Army Museum, Stockholm.

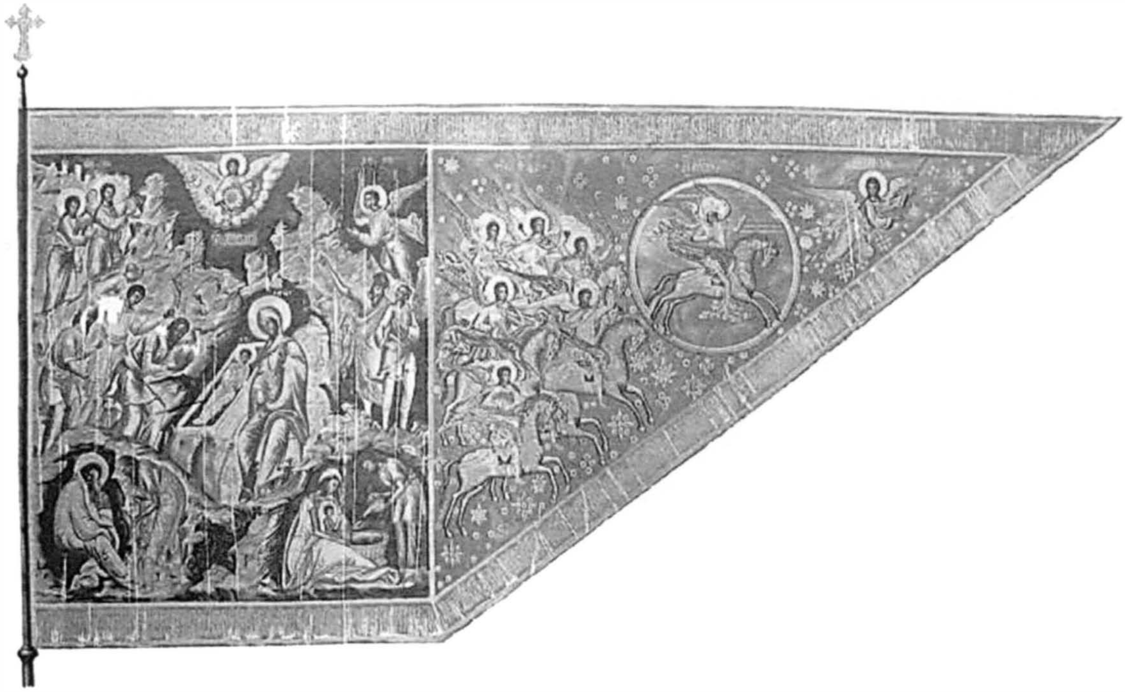
[84] Palmquist, *Några observationer*, pl. 19.



Right: Dragoon guidon, unknown regiment, mid seventeenth century. Length 210.0 cm, breadth 150.0 cm. The pole's length is 266.0 cm. The guidon may have been taken in Warsaw, if so possibly together with the banner depicted on p.211. (Army Museum, Stockholm, AM 083824)

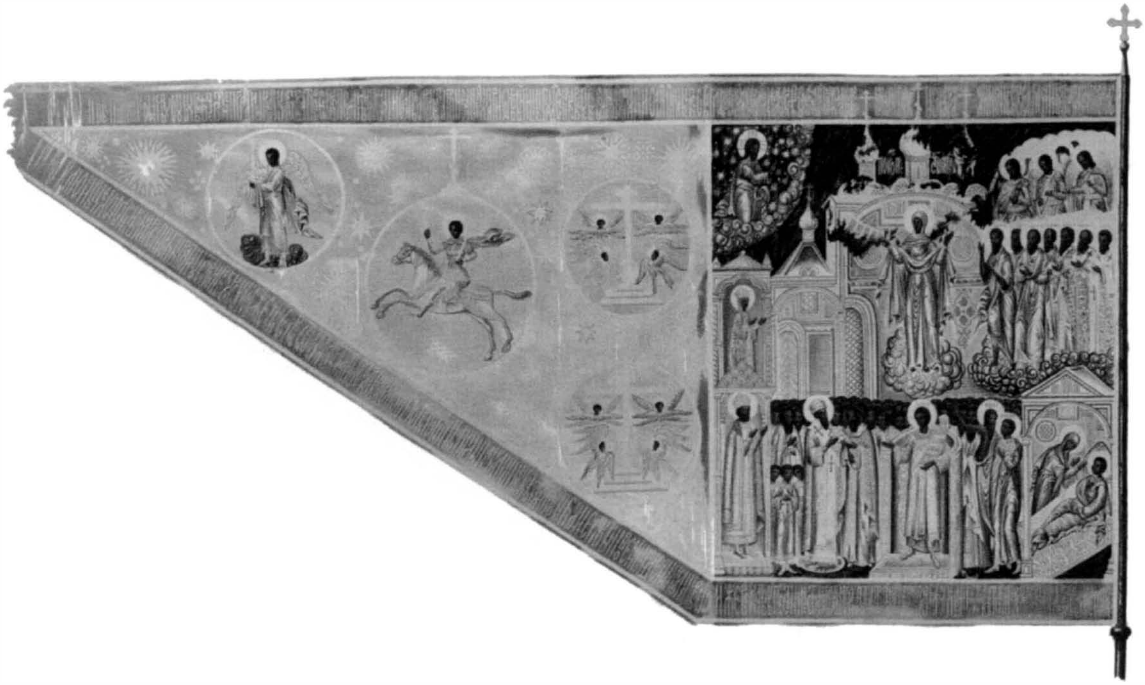


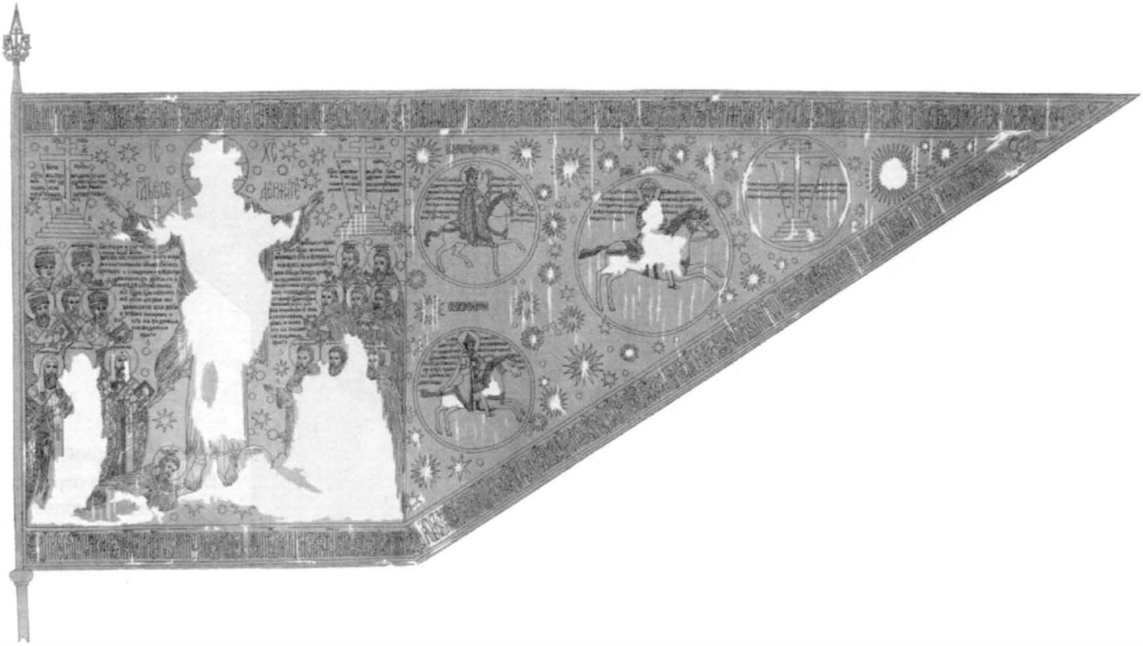
Right: Streltsy colour, unknown regiment, mid seventeenth century. Although attributed to a dragoon unit, the colour is of the type commonly employed by streltsy. Moreover, there are clear signs that the colour was cut from its original pole and then, after it was taken as a trophy, attached to a new pole. Present length 123.0 cm, breadth 126.0 cm. The present pole's length is 298.0 cm. The colour was taken in Warsaw, possibly together with the guidon above and the banner depicted on p.211. (Army Museum, Stockholm, AM 083826)



Above: The banner of the Tsar's Sovereign's Division, 1654.

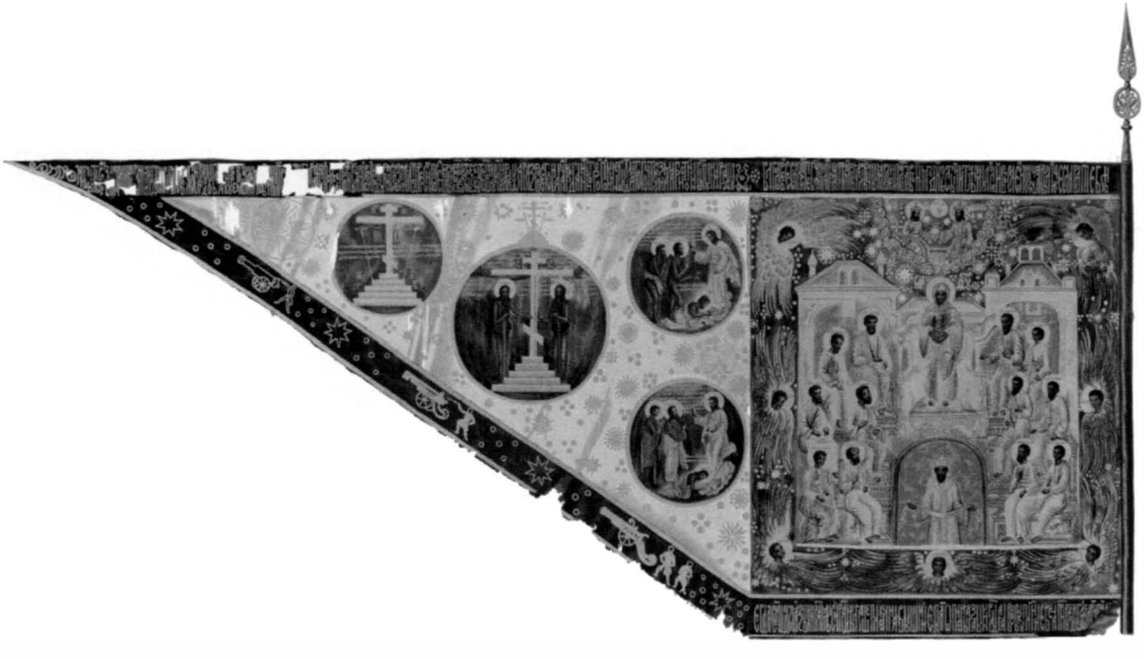
Below: The banner of the Great Division, commanded by Prince Yakov Cherkasskiy, of the Tsar's main field army, 1654.

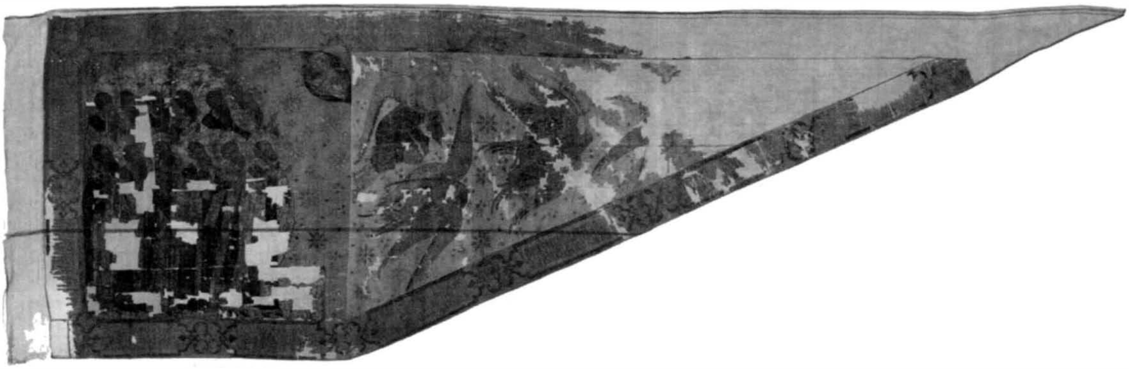




Above: The banner of the Rearguard Division, commanded by Prince Mikhail Temkin-Rostovskiy, of the Tsar's main field army, 1654. Below: The banner of the Great Division, commanded by Prince Yakov Cherkasskiy, of the Tsar's main field army, 1654.

Below: The banner of the Artillery, commanded by Fyodor Borisovich Dolmatov-Karpov (d. 1660), of the Tsar's main field army, 1654.





Above; A banner of the Vanguard Division, commanded by Prince Nikita Odoyevskiy, of the Tsar's main field army, 1654. Breadth 163.0 cm, length 500.0 cm. This banner was captured by a unit dispatched by Lithuanian Grand Hetman Janusz Radziwiłł in a night raid on one of the Muscovite camps at the stream Kolodnya near Smolensk on 5 July 1654. The raid, which was the first Commonwealth action against the Tsar's invasion army, was led by Lieutenant Colonel Hermann Ganskopf, who commanded a 'German' cavalry company from Dorpat in Swedish-held Livonia, four companies of dragoons, and several companies of light cavalry. Ganskopf and his men took a handful of prisoners, one of whom – the town cossack Kupriyan Moskovlev – eventually managed to return home to tell his story. Ganskopf's men also captured what was described as 13 Muscovite standards, the most significant of which no doubt was this one. Although the banner cannot be conclusively identified, it corresponds to other Muscovite banners in use at the time. There is accordingly a very high probability that the banner was Prince Nikita Odoyevskiy's primary Vanguard Division standard, since this particular banner was lost somewhere and never made it back to Moscow.

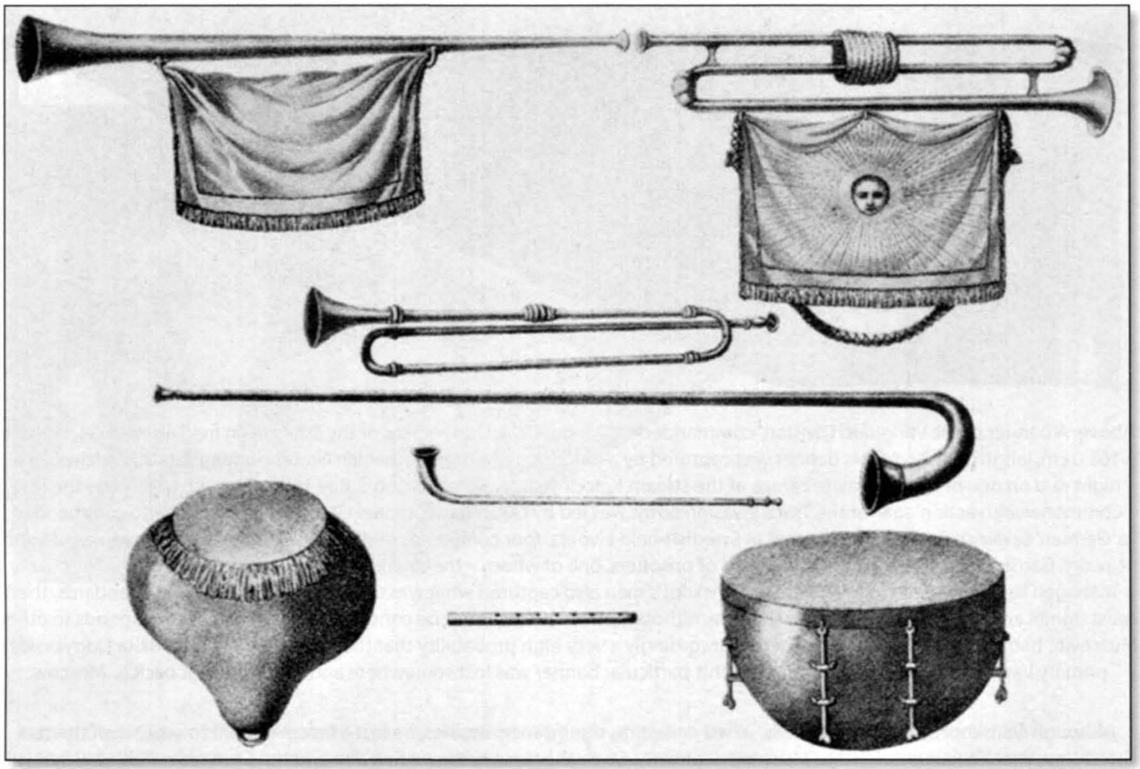
Although Ganskopf's raid was a success, it had no lasting significance. Besides, he lost a few men of his own. One of them, a Swedish soldier named Erik, fell into Muscovite captivity. Since the truce between Sweden and the Commonwealth by then still remained in force, we can assume that Erik was not the only Swedish soldier who served in the Dorpat company. Dorpat had been held by Sweden since 1625. It may thus be oddly appropriate that the banner captured by Ganskopf's men, having been sent to Warsaw as a trophy of the first action against the Tsar, in 1655 was taken by the Swedish army from Warsaw and removed to Stockholm as a trophy of the victory against the Commonwealth. (Army Museum, Stockholm, AM 082090)

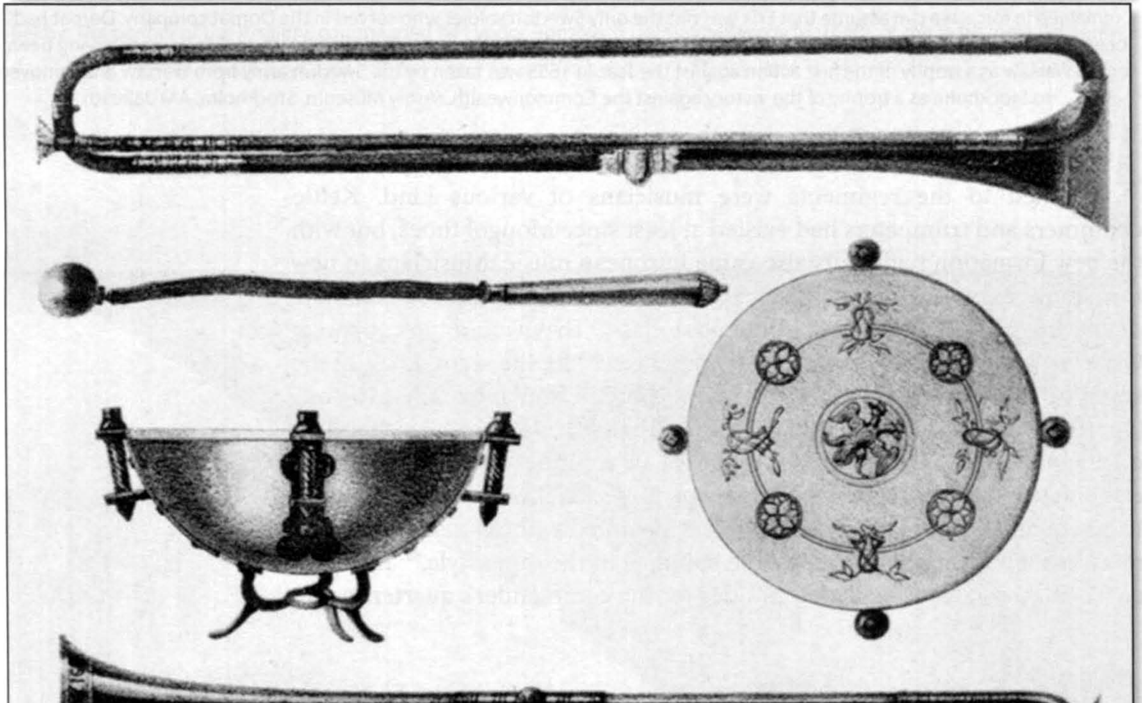
Attached to the regiments were musicians of various kind. Kettledrummers and trumpeters had existed at least since Mongol times, but with the new formation regiments also came European music. Musicians in new formation regiments might be boys aged 13 to 16 who played the drum, flute, or shawm (a wind instrument of the oboe class). They would typically wear German dress, decorated with silver or gold lace.[85] By the second half of the seventeenth century, drums seem to have come in fundamentally two sizes (approximately 38 and 50 cm in diameter and height, respectively), depending on their purpose. When drums were not in use, they were protected by elaborate cylindrical cloth covers (*chekhol*, pl. *chekhly*) with a diameter of 38 to 50 cm and a height of 65 to 85 cm, each painted with religious and other motives, or occasionally decorated in appliqué in the same style.[86] The cloth covers may also have been used as signs for the commander's quarters while

---

[85] Roberto Palacios-Fernandez, 'Muzykanty vybornykh moskovskikh soldatskikh polkov', *Zeughaus* 7 (1998), pp.7–9.

[86] Several drums and drum covers have been preserved in the Army Museum, Stockholm. For illustrations, see Velikanov, 'Salatskiye trofei', pp.7, 13.





in camp, if so hung from a spear.[87] While on this topic, it should be mentioned that officers used dedicated cloth gunlock covers of similar patterns, chiefly consisting of stylised flowers. Their dimensions were about 25 x 37 cm and they were made of fulled woollen fabric.[88]

Following steppe fashion, Muscovite cavalry used copper kettle-drums attached to the drummer's saddle for signalling. In the late sixteenth century, some kettle-drums were so big that they were carried:

Facing page, top: Trumpets and kettle-drums used by new formation regiments. (Aleksandr Viskovatov, 1841)

Facing page, bottom: Muscovite trumpets and kettle-drums. (Aleksandr Viskovatov, 1841)

> upon a board laid on four horses that are sparred together with chains, every drum having eight strikers or drummers, besides trumpets and shawms which they sound after a wild manner much different from ours. When they give any charge or make any invasion, they make a great halloo or shout altogether as loud as they can, which, with the sound of their trumpets, shawms, and drums, maketh a confused and horrible noise. So they set on first discharging their arrows, then dealing with their swords, which they use in a bravery to shake and brandish over their heads before they come to strokes.[89]

Logistics

While Muscovy succeeded in creating a modern military structure along Continental lines, its rulers were less successful in addressing the challenge of how to fund and supply the new army. Moscow continued to rely on non-cash payment of its troops through the traditional means of distribution of land grants and continued extraction and redistribution in kind. Moreover, Moscow failed to extend its provisioning system for food and supplies to its cavalry, which still was expected to provide for itself. Moscow also largely failed to create a logistics system that could supply an army across the mostly unpopulated territories beyond its southern border. The recurring logistical failures were caused by the vast size of Muscovy's theatres of operation, the lack of proper highways and roads, and climate conditions. However, this was a known problem, and something that the Muscovites improved over time.

The operations in the Ukraine, in particular, needed large supply trains due to the long distances which had to be covered. The wagons slowed the army's rate of march. Muscovite horses could sustain themselves by grazing when the season allowed. However, grazing probably required five hours or more each day, greatly reducing the cavalry's mobility. The horses also needed much water, especially during hot summer days. Most overland travel would have taken place in river valleys. Not only did this ensure access to water, for men and horses, but the vicinity of the river would in most cases also allow good pasturage. In addition, the river valleys of this region commonly had easy gradients which caused fewer problems for wagons and, with the exception of certain areas of rapids, enabled river craft to follow the army. In comparison, cross-country travel was risky, since lack of water and pasture might cause losses, while fires, whether natural or set by enemies, sometimes devastated the mixed grassland and woodland which constituted the land north of the Black Sea. Even so, the principal obstacle was the depth and width of those very rivers which were used as primary communication routes. The major rivers were often too deep and wide to be forded. Even where fords existed, the river banks might have needed grading for wagons to cross. The supply train rendered the army very vulnerable when crossing rivers or ascending river banks or hills.

---

[87] This was the contemporary interpretation of their function in Sweden, which may have been based on eyewitnesses. See, for example, official battle reports from the Swedish victory at Saladen, 1703; reprinted in Lars-Eric Höglund, Åke Sallnäs, and Alexander Bespalow, *Stora Nordiska Kriget 1700–1721* Vol. 3: *Ryssland, Sachsen, Preussen och Hannover – Fanor och uniformer* (Karlstad: Acedia Press, 2004), pp.47–8, 71–2.

[88] Several were taken as trophies, together with the drum covers, and have been preserved in the Army Museum, Stockholm.

[89] Giles Fletcher, *Of the Russian Commonwealth* (1591), in Berry and Crummey, *Rude & Barbarous Kingdom*, p.185.

As in the Commonwealth army, the wagons of the supply train were occasionally positioned as a defensive line to shield the army from raiding enemy horsemen. In the sixteenth century, Muscovite forces had developed this practice into a veritable wagon fort known as the *gulyaygorod* ('walking town'), made up of wagons fortified with about two-metre high mantlets and similar devices constructed of planks or logs and mounted on wheels or sledges, with holes bored for the musket barrels. The timber was framed to clasp together one piece within another, as when building a log cabin.

This elaborate concept, which was immovable when set up, was still in use. However, it was really only useful as a device against nomad cavalry armies. When a Muscovite force during the Połonka campaign in 1660 set up a *gulyaygorod* as a means of defence against a Commonwealth army in Lithuania under Stefan Czarniecki (*c.* 1599–1665) and Paweł Jan Sapieha (1609–1665; Lithuanian: Povilas Jonas Sapiega), the latter easily countered the stratagem by having their *infantry* dig in to prepare a line of fortifications to blockade the *gulyaygorod*. Jan Chryzostom Pasek witnessed the battle:

> No sooner had Czarniecki found out about this stratagem, but he straightaway ordered earthworks thrown up in front of the lines, small in size but densely packed. Both infantry and servants threw themselves into the task at once, carrying earth away in whatever they had, whether in caps or coat flaps, because the army did not have many spades in its inventory. In an hour or so, the entrenchments were ready, and the infantry and regimental cannons took cover. It happened very quickly. Our lines did not have to advance beyond the fortifications, they were to fight from there *defensive*, moving forward by regiments and taking *refugium* behind the earthworks if the fighting was hard.[90]

As a result, the Muscovite infantry left the *gulyaygorod* to confront the Commonwealth infantry, after which the Commonwealth hussars rode them down.

---

[90] Jan Chryzostom Pasek, *Pamiętniki; Całość* (Cracow: Polska Akademja Umiejętności, 1929), pp.78–9.

However, most wagons were not specially modified for use as a defensive line, except that they might be manned by armed men and even small ordnance such as wall guns. As a result, a wagon train could advance slowly together with the shielded units. This was, for instance, a tactics which occasionally was used on the Pontic steppe against Crimean Tatar incursions.

It was primarily on the southern steppes where Muscovite armies relied on large supply trains. Further to the north, supply was much easier enabled by riverine transport. Muscovy had no blue-water navy, but there were numerous river craft and Muscovites were experienced in their use. The great rivers often proved very useful as communication routes for supply purposes.

6

The Ukrainian Cossack Military Establishment

Those areas of Ukraine dominated by the Ukrainian cossacks during the Deluge is perhaps best described as a breakaway state which we can refer to as Cossack Ukraine, even though no formal state of this name was ever recognised by contemporaries. The Ukrainian cossacks primarily lived on the lower reaches of the Dnieper River. Most famous were the Zaporozhian cossacks who lived beyond the rapids of the Dnieper, from which they took their name (*za porogi*, 'beyond the river rapids'). Their territory (south of modern-day Zaporizhe) eventually became known as Zaporozhia. Although the Zaporozhian cossacks in the previous century had established a small proto-state known as the Sech' (or Sich, Sicha; 'stockade'), its lightly fortified cossack settlements had since fallen under the control of first the Grand Duchy of Lithuania, and then the Kingdom of Poland.[1] Besides, there were always far more cossacks, or 'wannabe' cossacks, than the Zaporozhians. These included large numbers of disgruntled Orthodox peasants of Ruthenian (corresponding to modern-day Ukrainian or Belarusian) origin who wanted to escape their Polish landowners, but also small groups of Tatars, Moldavians, Circassians and others from the Caucasus, Serbs, Germans, Muscovites, and individuals of almost any other origin and background, including Polish and Lithuanian adventurers who gravitated south with the intention to become cossacks. The specific share of each nationality is hotly argued among academics and others, but certainly the majority consisted of Orthodox Christian Ruthenians. Moreover, it will be shown that many of them went into Commonwealth service, in which they were formed up according to the town in which they served. The seventeenth-century French observer Pierre Chevalier astutely noted, that by his time 'the

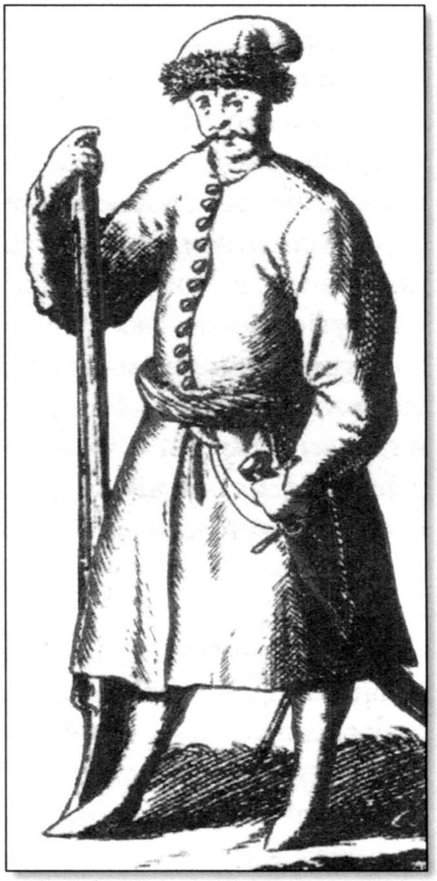
---

[1] On the Ukrainian cossacks, see Guillaume Le Vasseur, Chevalier de Beauplan, *Description de l'Ukranie depuis les confins de la Moscovie jusqu'aux limites de la Transylvanie* (Paris: J. Techener, 1861). Beauplan (1600–1673), a noble from Normandy, served 17 years (from 1630 to 1647) as a military engineer and cartographer attached to the Crown Army under Crown Field Hetman and, later, Crown Grand Hetman Stanisław Koniecpolski (1591–1646) stationed in the Ukraine. His work was first published in 1651. The Techener edition reproduces Beauplan's revised and enlarged 1660 text.

Cossacks are rather a Militia then a Nation, as most have thought.'[2]

Although at first limited to the territory on the lower Dnieper, from 1648 onwards Cossack Ukraine can be said to have increased to encompass all those Ruthenian territories no longer under the Commonwealth's control, that is, the provinces of Kiev, Bratslav, and Chernigov. However, the provinces of Podolia, Volhynia, and eastern Galicia (the L'vov region) remained more or less under Commonwealth rule and so should not be included in Cossack Ukraine. Another term commonly used for this semi-independent state dominated by cossacks is the Hetmanate (Russian: *Getmanshchina*), so named because the Hetman, Bogdan Khmel'nitskiy, established a headquarters which carried out state-like functions such as the operation of an army, courts, and independent foreign relations.

Having said this, another key factor during the uprising was the support provided by the Crimean Khanate. The Crimeans provided cavalry, which the cossacks lacked, and moreover, they were better trained for war than the levies which constituted a major part of Khmel'nitskiy's army. It has been noted that Khmel'nitskiy was averse to enter into any battle during the uprising, unless his men were supported by a Crimean army.[3]



Cossack musketeer, 1651. Dressed in the customary caftan and fur-lined cap, with a sabre as sidearm, most Ukrainian cossacks served on foot. (Beauplan)

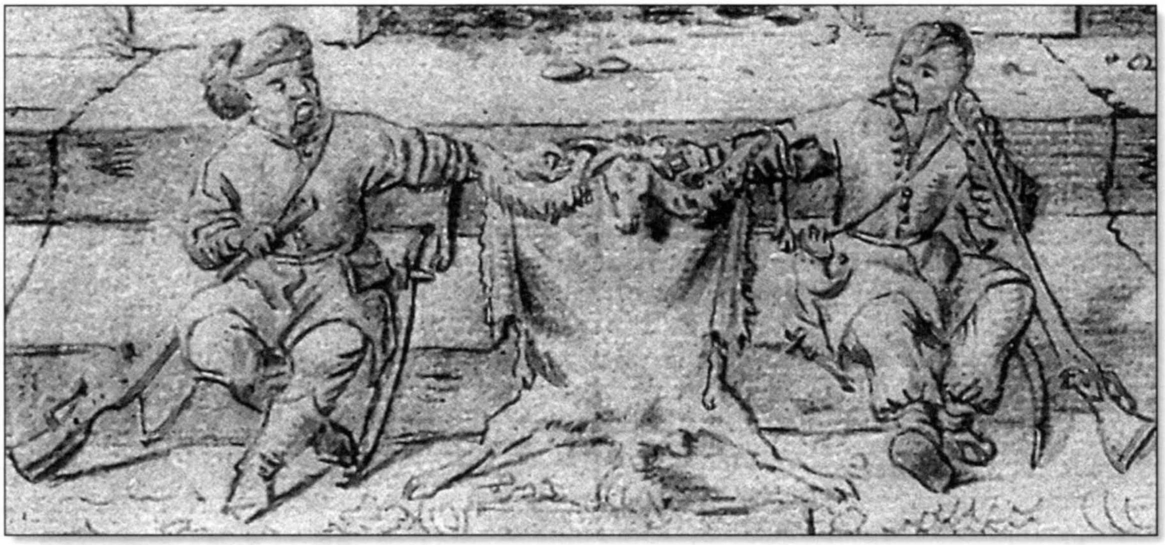
Like their counterparts in the Commonwealth and Muscovy, Cossack Ukraine's military system was based on eastern traditions. The cossacks had little knowledge of Continental tactics and forms of organisation, and they did not use them. There is no contemporary evidence for complex organisational forms or manoeuvres on the battlefield. If anything, they were more influenced by Ottoman military developments than those of any other foreign country.

Although the Ukrainian cossacks, like their Muscovite counterparts, in time became particularly famous as light cavalry, at this time they lacked a sufficient number of horses to maintain large cavalry units. Those that existed were primarily used for reconnaissance. Instead, most cossacks fought as infantry, armed with arquebuses and muskets. Moreover, cossacks employed a substantial artillery train. Since both the Commonwealth and Muscovy desired them to play a buffer role with regard to the threat posed

---

[2] Anon. [Pierre Chevalier], *A Discourse of the Original, Countrey, Manners, Government and Religion of the Cossacks, With Another of the Precopian Tartars, and the History of the Wars of the Cossacks against Poland* (London: Hobart Kemp, 1672), p.9. Pierre Chevalier served as a secretary of the French mission in Poland at some point between 1648 and 1654. He used Beauplan's work as well as Joachim Pastorius, *Bellum scythico-cosacicum, seu, De conjuratione Tartarorum Cosacorum et plebis Russicae contra regnum Poloniae ab invictissimo Poloniae et Sveciaerege Ioanne Casimirio* (Dantzig: Georg Förster, 1652). However, he also added additional materials, in particular on the Tatars. For the original, see Chevalier, Pierre, *Histoire de la guerre des cosaques contre la Pologne, avec un discours de leur origine, païs, mœurs, gouvernement & religion: Et un autre des Tartares Précopites* (Paris: Thomas Iolly, 1668).

[3] Babulin, *Bor'ba za Ukrainu*, p.89.



Two cossack musketeers, 1651. Dressed in the customary caftan, each is armed with a musket and sabre. (Beauplan)

by the Crimean Tatars, both governments occasionally gave cannons as gifts to the cossacks.

The emergence of the Ukrainian cossacks as free irregulars who in the previous century voluntarily coalesced into the Zaporozhian Sech' already by the time of the Deluge gave rise to the myth of the free, individualistic cossack, unrestrained by organisation and regulations, who fought heroically and, seemingly, for the sheer joy of it. Such men no doubt existed, but they never constituted more than a small minority. A far larger share of the cossack armies of the 1650s consisted of levied peasants, poorly trained and armed only with light or even improvised weapons such as axes or cudgels or those manufactured from scythes and other farming tools. Most lacked firearms altogether, and some relied on bow and arrow. They wore no armour. Yet, the core of the army of Cossack Ukraine consisted of those cossacks who had served as professional soldiers – registered cossacks – within the Commonwealth army. It is among them that we find the real fighting strength of the Ukrainian cossacks.

Organisation

The earliest formal military organisation of the Ukrainian cossacks was provided by the Commonwealth, which since 1572 recruited cossacks as soldiers. The men so recruited became known as 'registered cossacks' (Polish: *kozacy rejestrowi*; Russian: *reyestrovyye kazaki*), since they were listed in a specially prepared register, granted economic concessions such as tax exemption, and formed into military units, with an appointed overall commander known as a hetman. Organised as one division or regiment (*polk*) per town, subdivided into company-strength 'hundreds' (*sotni*), the majority served as infantry. The minority who served as light cavalry often did so in a support role to hussar units. In similarity to other Commonwealth cavalry, each cossack horseman had to supply his own weapons and equipment.

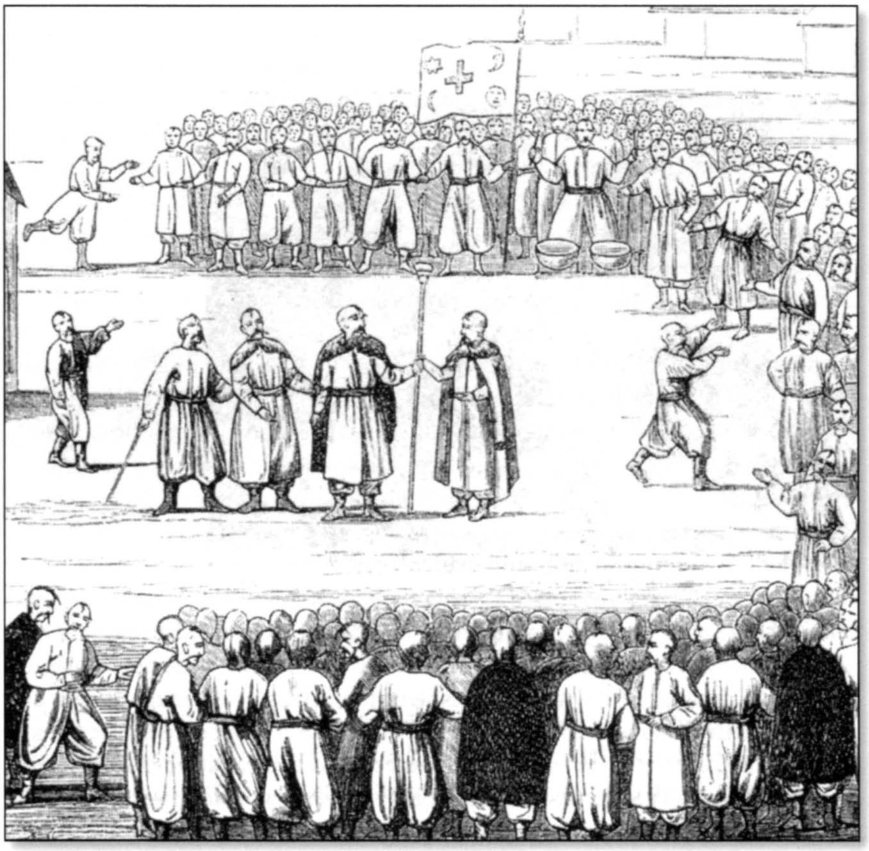
Enrolment as a registered cossack was popular, not least because of the economic concessions, and the cossacks generally pushed for increases in the number of registered cossacks. According to the Treaty of Zborov (Polish: Zborów; Ukrainian: Zboriv), signed on 18 August 1649 but never ratified by parliament, the permitted number of registered cossacks was raised to 40,000 (Table 13 – see end of chapter). Even this did not satisfy the aspirations of cossacks, which became obvious in the 1654 Treaty of Pereyaslav, in which Tsar Alexis promised to raise the number of registered cossacks – with fundamentally identical conditions to those within the Commonwealth – to 60,000.

Since only a minority of cossacks were registered, and received the anticipated economic concessions, this did little to resolve the divisive issues between landless Orthodox Ruthenian peasants and Catholic Polish landowners. On the other hand, the register had some success in preventing the cossacks from forming a state of their own. When uprisings took place, it was never certain which registered cossack regiments would fight on the side of the Commonwealth, and which would join the rebels. As a result, there was no Ukrainian cossack state as such, only a number of culturally and religiously related settlements which by tradition co-operated in raiding and other military pursuits. The Sech' had already lost its role as a cossack capital in the first decades of the seventeenth century. If there subsequently was any political centre among the Ukrainian cossacks, it was embodied in the person of the hetman. Even so, not all cossacks supported him, and the hetman could not expect that all his orders would be obeyed even by his followers.

Moreover, the non-registered, irregular cossacks continued their existence in the borderlands, often suffering the raiding of Crimean Tatars and occasionally inflicting the same on their Tatar and other neighbours. To receive advance warning of Tatar raiders, watchtowers were erected in each settlement throughout the borderlands. Typically built from three or four long tree trunks with a small platform on top, the watchman who spotted Tatar raiders would rapidly set fire to a nearby beacon as a warning signal to alert the neighbouring settlements and watchtowers.

Ukrainian cossacks were characterised by a very fluid military organisation. The primary unit of the registered cossacks was the 'hundred' (*sotnya*) or company, commanded by a captain or rather a 'commander of hundred' (*sotnik*). The number of men in a company varied according to circumstances, ranging from a handful up to about 200 or even 300 (according to the 1649 Register). A registered cossack regiment was commanded by a colonel. He had a command staff (*starshina*) consisting of a few individuals, including a deputy commander (*yesaul*), an artillery train chief (*oboznyy*), a judge (*sud'ya*), and a scribe (*pisar'*) who handled the unit's administration, wrote letters, and thus formed the real link between the colonel and the state. A regiment had some integral artillery. The regimental artillery is believed most commonly to have consisted of five or six cannons, but some regiments apparently had significantly more.

The free cossacks were organised in a similar way, although under elected leaders and within a looser structure. Most were formed into small bands each based on a settlement (*kuren'*, pl. *kureni*; from Tatar *küren* which meant wagon



A cossack *rada* (assembly), which functioned as the supreme executive, legislative, judicial, and administrative institution of the cossacks. The engraving gives a good overview of cossack dress as well as a banner and two kettle drums. The cossacks also used trumpets of various kinds. (Copperplate, attributed to the seventeenth century)

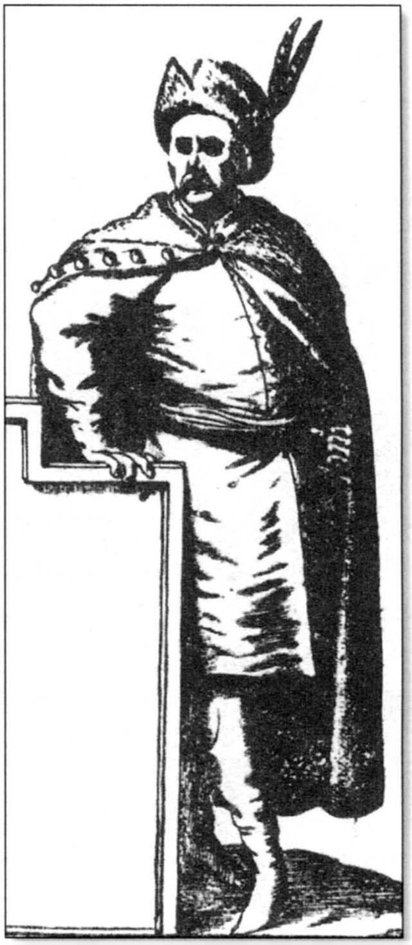
fort[4]). Several bands grouped together in a 'hundred' (*sotnya*) or company. A number of companies served under an elected commander (*hetman*), As noted, this title betrayed both German and Turkic linguistic influences and most likely reached the cossacks from the Commonwealth. To the cossacks, however, the term seemed related to the existing cossack title *ataman* ('chief'), which probably derived from the Turkic noun *ata* (father) and the suffix *-man* which denoted intensive significance, thus producing a word with the meaning of 'great father' or 'elder'.

Khmel'nitskiy established a Hetmanate command staff organised in a similar way to a regular regimental staff, with the same types of officers who accordingly were styled the 'general' command staff (*general'naya starshina*). Its officers accordingly carried titles beginning with the word for general (for instance, *general'nyy oboznyy*, or general of the artillery train). The general command staff together with the colonels constituted the command assembly (*rada starshin*) which functioned as a government over and above the overall military assembly (*voyskovaya rada*) which encompassed all cossacks and might be compared to a parliament. The Hetman's scribe (*pisar'*) essentially functioned as his chancellor and also handled foreign diplomacy. The Hetman's artillery train included both his personal regimental artillery and some heavier cannons. At the time of Khmel'nitskiy's death in mid 1657, his arsenal reportedly included no less than 120 regimental cannons and a field artillery of some 30 heavier cannons.[5]

---

[4] The term *kuren'* seems occasionally to have been used by registered cossacks for a unit consisting of more than one 'hundred'. However, if so, this was no doubt an ad hoc field structure related to the original meaning of the word, wagon fort.

Khmel'nitskiy took over and used the registered regimental organisation as his only higher formations. We have seen that in the early years of Khmel'nitskiy's uprising, most regiments consisted of from 2,000 to 3,000 men. After Khmel'nitskiy's death, the strength of the cossack regiments suffered from both attrition and general dissatisfaction, so the average regimental strength then dwindled to some 1,500 men.[6]



Cossack officer, 1651. Dressed in a similar manner to other well-to-do Commonwealth men, this Ukrainian cossack officer is armed with a sabre. (Beauplan)

Arms, Armour and Dress

Cossack armaments consisted of those common in Muscovy, primarily the composite bow, sabre, berdysh pole-axe, musket, and the occasional pistol or carbine. A few cossack cavalry might carry lances, but this was unusual. A leader would carry a mace as a symbol of rank, following Muscovite and Commonwealth practices which ultimately derived from the Mongols.

Likewise, cossacks wore the same general dress as Muscovites, based on a fur hat, caftan, long undergarment, and soft boots or, in the case of many infantrymen, simple peasant shoes. We have seen that garment styles in the Commonwealth were very similar. Those cossacks who had the means tended to wear flamboyant dress, including fur-collared cloaks and quite frequently baggy trousers in the Ottoman style. Some Zaporozhians apparently fought stripped to the waist in summer. Many shaved their foreheads and necks but for a long lock on the top, combed onto the forehead (known as the 'herring' or 'crest' style, Ukrainian: *oseledets* or *chub*), and wore long moustaches (which, as we have seen, derived from the Tatars, also was the prevalent style in the Commonwealth, and was common in the Ottoman Empire).

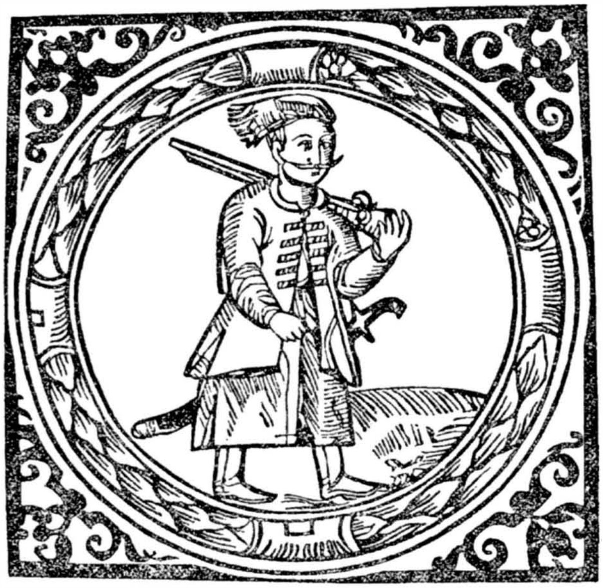
Banners and Music

Ukrainian cossack flags came in a large variety of shapes, sizes, and colours. Most known Ukrainian cossack flags bore Orthodox religious symbols, often a cross. Flags of major leaders such as Bogdan Khmel'nitskiy might depict an archangel. Some had stars or a half-moon. Most company (*sotnya*) flags were plain, with a simple cross, but some were bordered. Certain cossacks leaders adopted the Tatar style of fielding a horse-tail standard (*tugh*; cossacks called it a *bunchuk*), a pole with circularly arranged horse tails attached at the top.

---

[5] Babulin, *Bor'ba za Ukrainu*, 87.

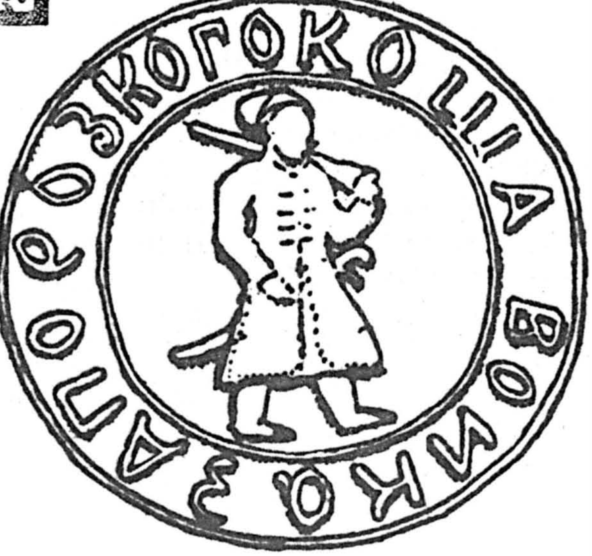
[6] Babulin, *Bitva pod Konotopom*, pp.13–14; Babulin, *Bor'ba za Ukrainu*, p.214.

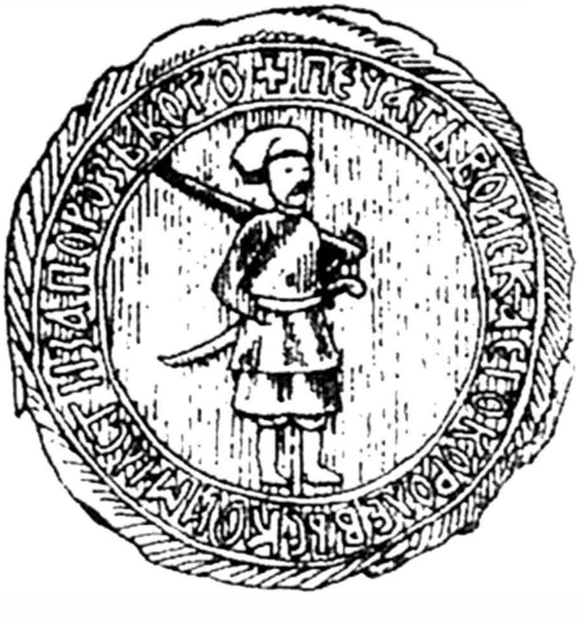


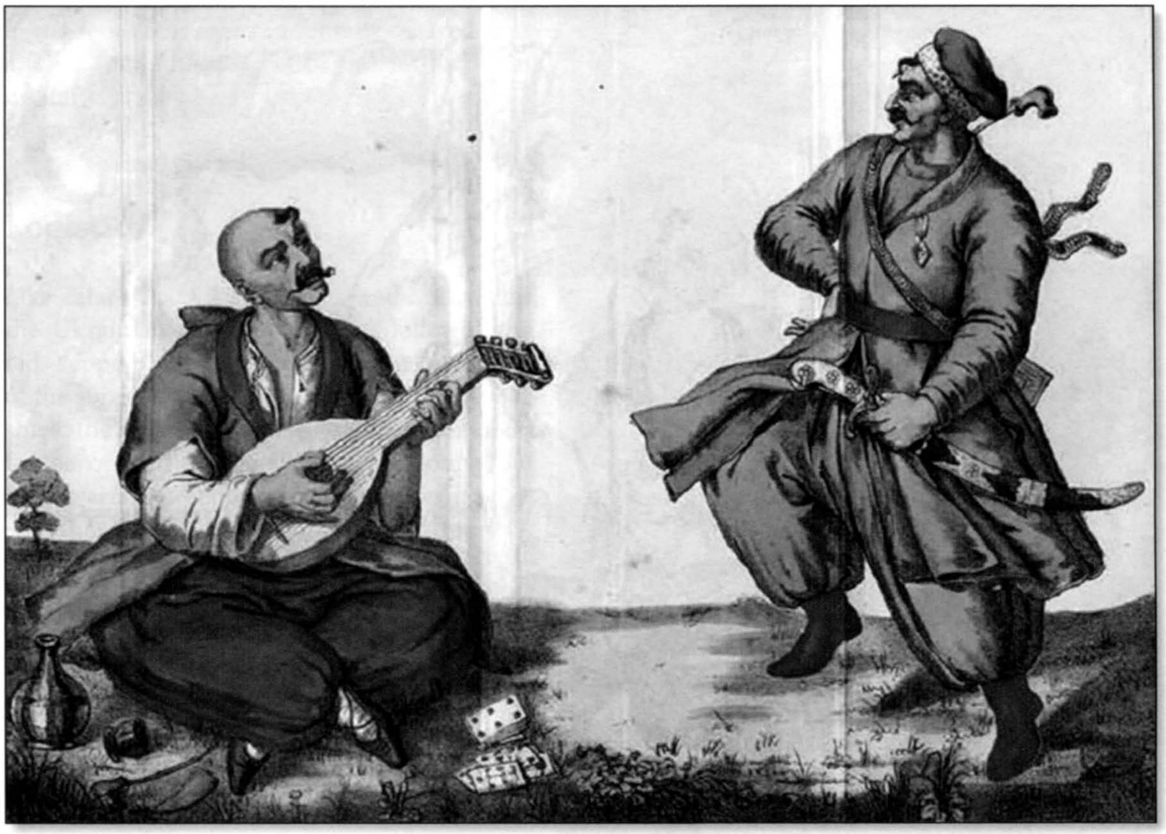
Above: Cossack infantryman. (Engraving by Cassian Sakowicz, 1622)

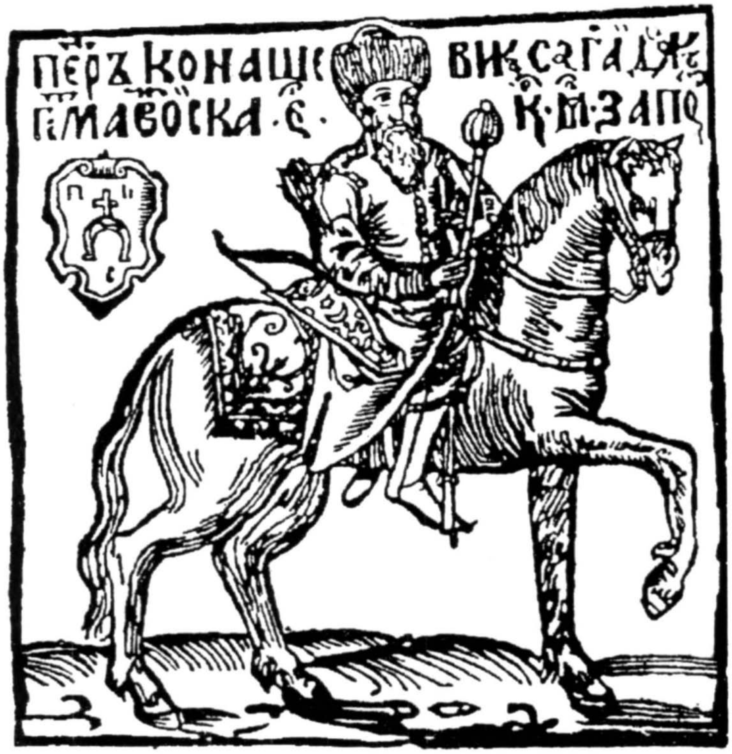
Right: Cossack infantryman, as depicted on a cossack seal, 1620s.

Below: Cossack infantryman, as depicted on Bogdan Khmel'nitskiy's seal, 1648. No notable change in dress had taken place since the 1620s.



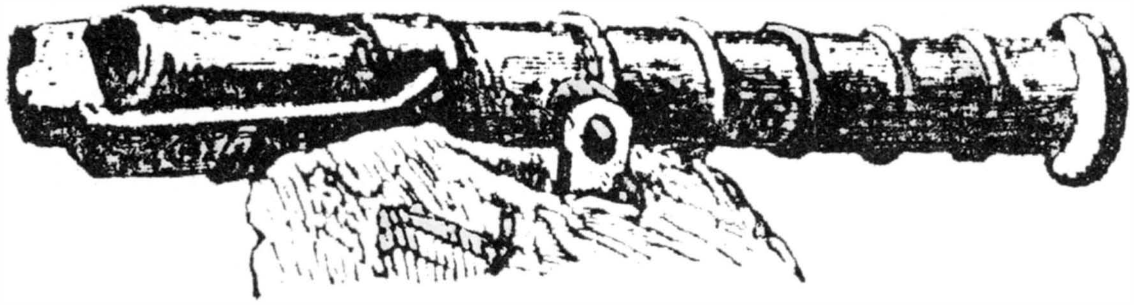





ПЕРЪ КОНАЩЕ
ВИЧЪ САГАДЖ
ГЕТМА ВОЙСКА · Е ·
К · М · ЗАПО
П
С

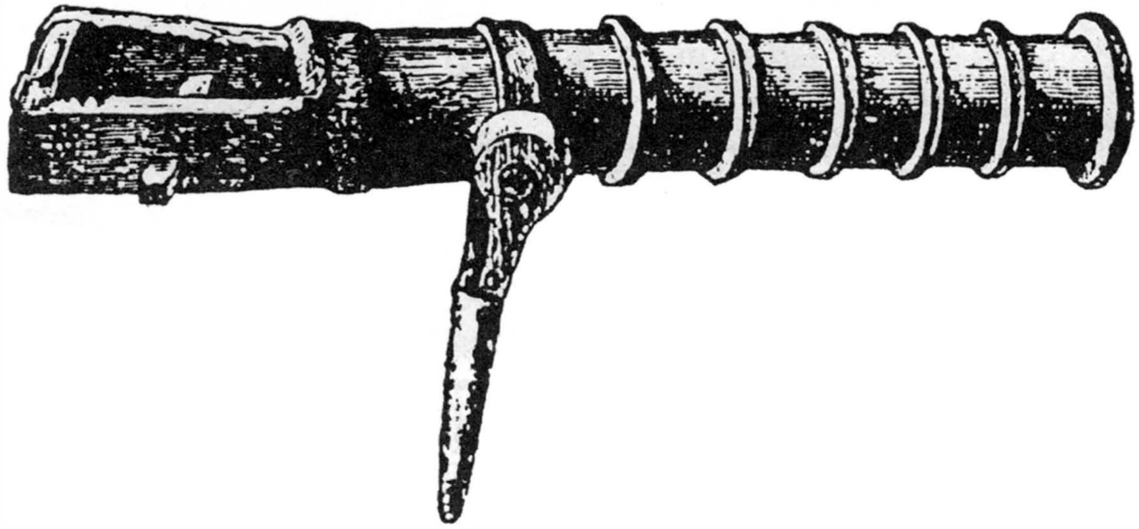
Above: The characteristic dress of seventeenth-century Zaporozhian cossacks, one of whom is playing a *kobza* (lute). (Alexander Rigelman, first printed 1785-1786 followed by a colour edition 1847)

Left: Senior cossack officer. (Engraving by Cassian Sakowicz depicting Pyotr Sagaydachniy, 1622)



Above: Large cossack falconet. (Mikhail Grushevskiy)

Below: Small cossack falconet, for use on a wagon or boat. (Mikhail Grushevskiy)



When Hetman Khmel'nitskiy submitted to Muscovy, he changed at least some of his banners. Previously, his primary banner had a text meaning 'Bogdan Khmel'nitskiy, Hetman of His Royal Grace's Zaporozhian Host', which was a reference to the King of Poland. Henceforth, he instead flew banners which referenced the Tsar, including one which said 'Banner of His Imperial Highness's Zaporozhian Host on the Black Sea and Rivers Dnieper and Danube'. As the name implies, this particular banner was flown by his fleet. A bright red banner, it depicted a stylised version of an inshore sailing vessel of a type commonly used in northern Europe and Muscovy (in the Baltic, it was known as a *struts*). In one corner, the banner displayed Christ with a halo of stars to represent the 12 Apostles, and in the other, Archangel Michael.[7]

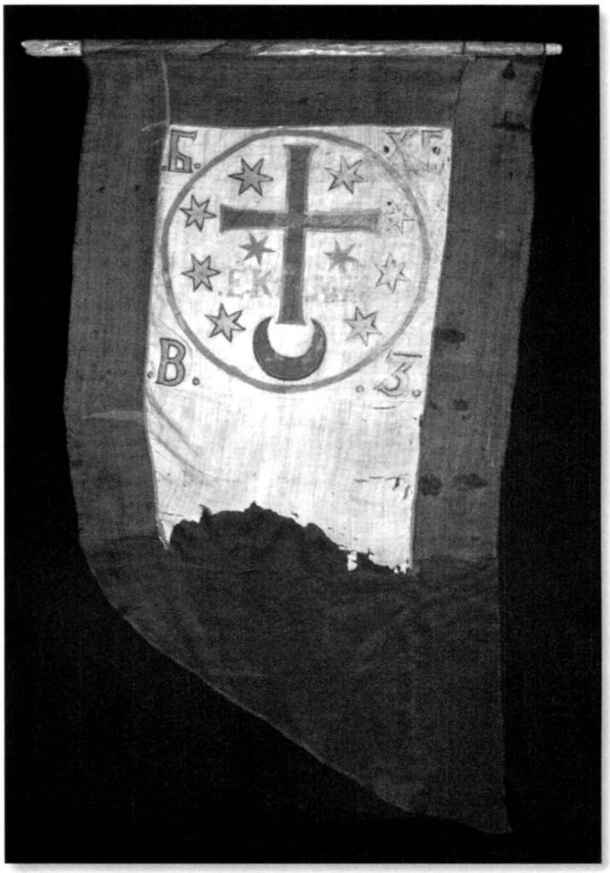
For music, a cossack unit would bring a pair of kettle-drums, sometimes mounted on a cart. Other instruments depended on personal choices. Among the musical instruments most popular with the cossacks was the *kobza* (lute), in modern times more commonly referred to as a *bandura*. Such instruments had no particular military purpose but were certainly used by cossacks.

---

[7] Rob Morgan, 'Cossacks at Sea: Naval Flags and Banners', *Arquebusier* 25: 2 (1999), pp.22, 24.

Logistics

Like Tatars, Poles, Lithuanians, and Muscovites, the Ukrainian cossacks at times followed the old steppe practice of positioning the wagons of the supply train (*tabor*) as a defensive line to shield the army from raiding enemy horsemen.[8] In the open, the wagon fort commonly (but not invariably) deployed in a triangle. If so, it was immovable. The wagons were not specially modified for this purpose, except that they might be manned by armed men and even small ordnance such as wall guns. Alternatively, the wagon train could be kept on the move, advancing slowly. This was, for instance, a tactics which occasionally was used on the Pontic steppe against Crimean Tatar incursions.



Banner of Bogdan Khmel'nitskiy, captured by Commonwealth forces at Berestechko in 1651 and by the Swedish army in Warsaw in 1655. The letters mean "Bogdan Khmel'nitskiy, Hetman of His Royal Grace's Zaporozhian Host". (Army Museum, Stockholm, AM 082451)

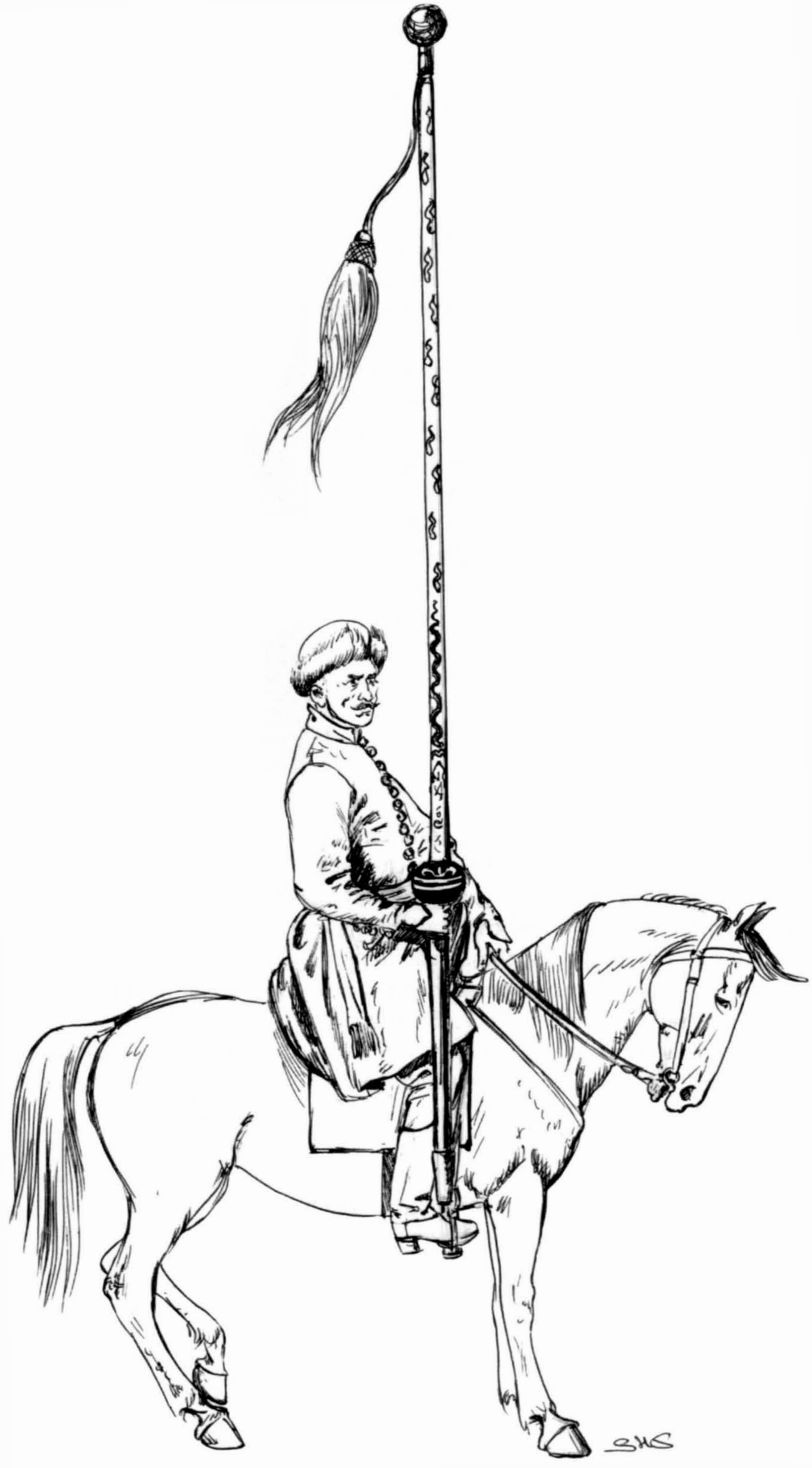
Navy

Similarly to the Muscovites, the Ukrainian cossacks made significant use of riverine and inshore fleets. The cossacks used riverine crafts such as the *chayka* ('seagull'). Such a vessel would typically be between 15 and 25 m long, with a width of 3 to 4 m, and carry a fighting crew of some 50 to 70 men, in addition to from two to six small cannons (falconets).[9] Although chiefly designed for riverine transport and primarily propelled by pairs of oars, such craft carried sails and were sufficiently seaworthy to carry out raids along the shores of the Black Sea. As we have seen, Khmel'nitskiy also employed at least a few sailing vessels of the *struts* type.

---

[8] Beauplan, *Description*, pp.21, 94–5; Anon. [Chevalier], *Discourse*, p.17.

[9] Based on a reconstruction in the Odessa Maritime Museum, in turn based on a contemporary depiction. Michael Fredholm von Essen, 'The Cossack Chaika', *Arquebusier* 25: 2 (1999), p.19. For a contemporary description, see Beauplan, *Description*, pp.105–9.



Ukrainian cossack standard-bearer, carrying a *bunchuk*, a Tatar-style horse-tail standard. (Illustration by Sergey Shamenkov)

Tables

Table 13 (see p.219). The Registered Cossack Regiments, After the 1649 Treaty of Zborov

Source: Marek Gędek, *Atlas historyczny wojen polskich* (Warsaw: Bellona, 2009), pp.90–91

Regiment and Town	**Number of Registered Cossacks**
Belotserkov'	2,990
Bratslav	2,662
Cherkasy	2,990
Chernigov	998
Chigirin	3,220
Kal'nik	2,050
Kanev	3,167
Kiev	2,002
Korsun'	3,470
Kropivna	1,993
Mirgorod	3,009
Nezhin	991
Pereyaslav	2,986
Poltava	2,970
Priluki	1,996
Uman'	2,977
Total	40,471

7

The Transylvanian Military Establishment

The Transylvanian army was, like Transylvania itself, multiethnic. Both the population and the army consisted of a coalition of the Hungarian nobility, the 'Saxon' (that is, ethnic German) burghers, and the Székely, who likely were the descendants of Hungarian frontier guard units once established in the eastern Carpathian Mountains.[1]

By tradition, the Transylvanian military establishment was based on the county levy system. Each county (*comitatus*) or similarly designated region was obliged to raise levies in times of war. The levy, in turn, was divided into three components: the Levy of the Nobility, which consisted of nobles and their retinues and served on horseback; the Militia Portalis, which was raised by secular and ecclesiastical nobles from their peasants, consisted of both horse and foot (the latter poorly trained and armed, apparently, with spears), and only was obliged to serve in defence of the county; and the General Levy, which consisted of all able-bodied men. By the time of the Deluge, it was only the Levy of the Nobility which still had some measure of military importance, despite being comparatively few in numbers. Even its use was limited, since most nobles lacked both training and experience. Their situation can be compared to that of Sweden, Brandenburg, and the north-western parts of the Commonwealth, where the nobility still carried a hereditary feudal obligation to serve, no longer played a major military role, but yet were legally required to participate when the levy was called up. From 1658 at the latest, many Transylvanian nobles sent a hired soldier to the army instead of appearing in person. When the Transylvanian army went on campaign, some temporary border defence units were kept on war footing.

---

[1] Comparatively little research has been done on the Transylvanian military establishment at the time of the Deluge. The most easily accessible treatise on the Transylvanian army is Zsolt Schäfer (ed.), *Soldiers from the Age of GáborBethlen* (np: Bethlen Gábor Hagyományőrség Egyesület, 2017; available online). Although Schäfer concentrates on the early seventeenth century, the traditional aspects of the army had changed little at the time of the Deluge. For additional details specifically from the Deluge, see Marcin Sowa, 'Transylvanian Military in Mid-17th Century', Michał Paradowski and Rafał Szwelicki (eds), *The Deluge: Northern War 1655–1660* – Supplement to *By Fire and Sword Historical Wargame* (Warsaw: Wargamer, 2015), pp.206–31.

Although then almost the only remaining military force in the country, with the exception of the garrisons of important border castles, the border defence units at the time of the Deluge were obsolete and fundamentally unable to protect Transylvania from foreign invasion.

In short, from a military viewpoint Transylvania was a backward country and essentially open to foreign invasion. Its rulers attempted to respond to this vulnerability in several ways. First, wealthy nobles who wanted their own lands protected raised household units, known as Trabant units. Second, towns for the same reason raised armed units, too, in the form of Saxon burgher militias and some enlisted haiduk units. Third, the rural Székely raised levies of their own. We will see that Székely levies were regarded as superior in military ability to other levied units. Finally, the Prince raised his own standing household units. Consisting of both cavalry and infantry units, they were professional soldiers. When going to war, the Prince would add national and foreign mercenary units. Of the latter, he favoured German enlisted units, since they were professionals armed and organised in the Continental manner. The artillery, too, was essentially of this type. However, Moldavian and Wallachian light cavalry or other non-German units might be hired as well.

For practical reasons, Transylvania relied on the same troop types when engaging in offensive warfare. This resulted in a very heterogeneous army. Since the Saxon burgher militias fundamentally protected their own towns only, the army's only modern force consisted of a small number of enlisted units hired by the Prince of Transylvania. Most were German Protestants armed and organised in the Continental manner, primarily as musketeers although usually some served as pikemen, in addition to cavalry, dragoons, and artillerymen. No pikemen were hired when Prince George Rákóczy in 1657 invaded the Commonwealth. These units were able, but because of their expense, units armed in the Continental manner only constituted a minority within the army.

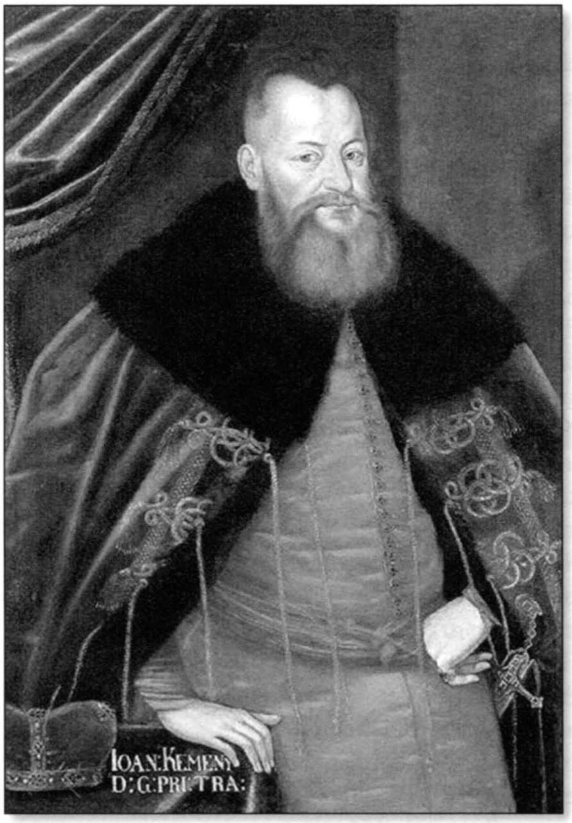
Instead, most Transylvanian troops were Székely, serving as irregular light cavalry or light infantry. Some served only for plunder, not pay. The latter, also known as free haiduks (Hungarian: *hajdú*; the term seems to derive from the Ottoman Turkish word for 'bandit' and the Hungarian word for cattle 'drover', both of which fitted their job description), were excellent light infantry but commonly spent more time marauding than fighting the enemy. Among them were also groups of irregular cavalry consisting of Moldavian and Wallachian volunteers, primarily motivated by the opportunity to gain plunder. It is accordingly unsurprising that few Transylvanian troops were uniformly trained and most were incapable of fighting in close formation.

The major part of the Transylvanian army which Prince George Rákóczy in 1657 led into the Commonwealth consisted of cavalry. There seems to be no known source that gives a detailed, reliable breakdown or describes the internal structure of the army. We can, however, expect that the Transylvanian cavalry included the semi-feudal Levy of the Nobility, the Prince's household cavalry (in total, presumably a few thousands), a few enlisted German cavalry units, but also, in far greater numbers, haiduk irregulars, who would have made up the majority of the Transylvanian cavalry.

The infantry was almost certainly a combination of enlisted German companies of foot, princely and noble Trabant units, Székely and Saxon musketeers, and haiduk irregulars on foot. We also know that some dragoons were enlisted, since one of their commanders, Captain Mansfeld, died at Trembovlya, where the survivors of Prince George's army fell into Tatar captivity. There was also at least one unit of Seimeni (a term derived from Ottoman Turkish *seghmen*, meaning irregular soldier), that is, mercenary infantry of Serb or other origin armed with arquebuses or light muskets of the Ottoman type.

As for artillery, it is certain that Prince George Rákóczy brought some cannons into the Commonwealth. We do not know how many, or of which calibre. Due to difficulties in transportation, it seems reasonable to assume that most were 10-pounders. Total numbers available in Transylvania suggest that not that many would have been available for a foreign expedition, possibly only around 20 or so.

Among Prince George's more experienced commanders was his deputy, János Kemény (1607–1662). Kemény had participated in the 1644–1645 expedition into Bohemia during the Thirty Years' War, in which Transylvanians had joined forces with the Swedish army under Field Marshal Lennart Torstensson.



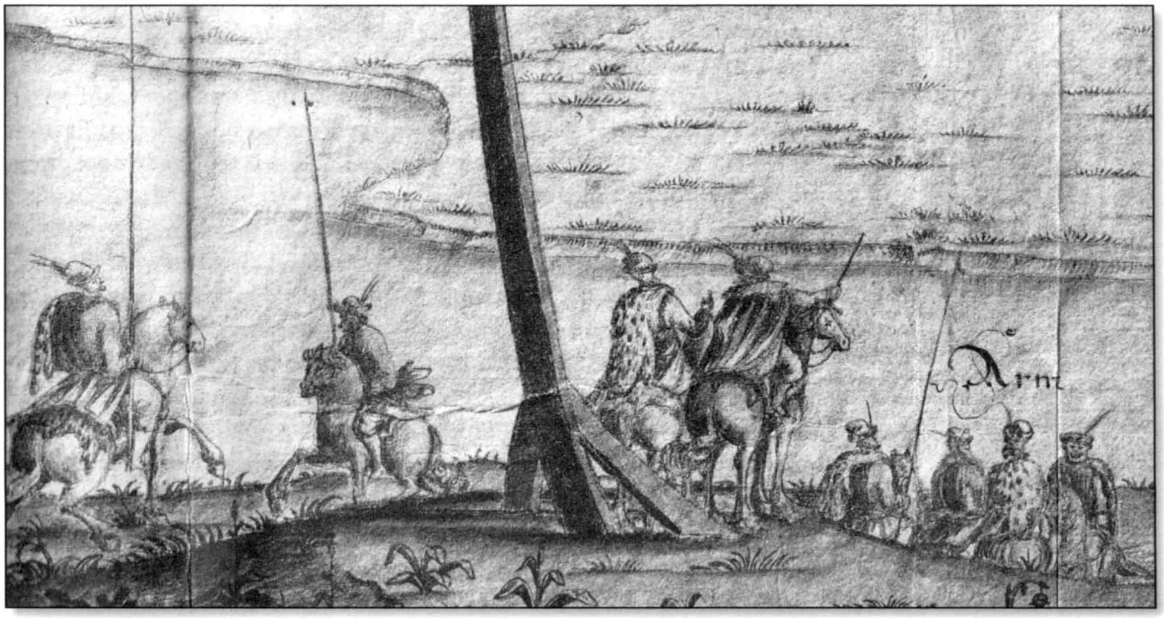
János Kemény, 1661.

The incursions into the Empire during the Thirty Years' War had exposed the many shortcomings of the Transylvanian army, including its lack of training, and in particular, its inability to cope with modern warfare including siege methods. There were few artillery officers and engineers, and there was even a shortage of reliable infantry. We will see that none of these faults had been corrected at the time of the Deluge. The Transylvanian army included quite a few brave men, but its deficiencies as an army would soon be obvious.

Tactical Doctrines

Transylvanian light infantry tactics depended on ambushes, surprise attacks, and raids. The troops did not fight in formation, and when exposed to enemy fire, the men would get down on the ground or take cover, something which was strictly forbidden in Continental units, since it disrupted the formation. As a result, Transylvanian infantry excelled at the small war, but they could not stand up to disciplined and trained opponents in an open battle. This should not be dismissed as lack of bravery; it was simply a radically different way of fighting, and of choosing when and where to engage in combat.

The same can be said about Transylvanian cavalry. Those who had the means wore armour and served as hussars, while others served as haiduk



Transylvanians at Zakroczym, March 1657. (Erik Dahlbergh)

irregulars. Both types fought as skirmishers, with lance, sabre, and the occasional firearm. Hussars at times fought as shock cavalry, but only when the opponent had already been softened up.

Transylvanian cavalry, of either type, was generally too proud to dismount. For this reason, they also mostly refused to take part in assaults on fortified positions, since this would have to be done on foot. In fact, this attitude characterised all Transylvanian soldiers and was not altogether a sign of pride and insubordination. Very few Transylvanian soldiers had the necessary skills to carry out siegeworks. For this purpose, professional soldiers would have to be enlisted elsewhere. During both the Thirty Years' War and the Deluge, whenever Swedish and Transylvanian armies operated together the Swedes had to shoulder most responsibilities whenever duties involved engineers, sappers, and sieges.

Although the Transylvanian army had participated, briefly, in the Thirty Years' War, these campaigns had faced limited opposition. As a result, the army was inexperienced, and particularly so against opponents who had adopted modern forms of organisation and tactics. Another weak point was logistics. We will see that when the Transylvanians set out on campaign, it brought a large supply train, which slowed the army down to such an extent that its Commonwealth opponents easily moved in circles around it.

Organisation

The organisation of most Transylvanian units was not standardised. A Transylvanian army consisted of several regimental-sized units each called a *sereg* (Hungarian for 'soldiery', perhaps best translated as contingent; Hungarian s- is pronounced sh-). Each numbered several hundred men. A raiding force might consist of from two to four such units, while an army would consist of up to eight. Each might be cavalry or infantry, depending on how it had been raised.

Transylvanian feudal cavalry formed up in a manner similar to traditional Commonwealth cavalry, in a semi-feudal 'banner' organisation based on nobles, vassals, and their retinues. There is no doubt that these cavalry formations were regarded as the primary arm of the Transylvanian military establishment. In 1644, the Transylvanian castellan Gábor Haller (*c.*1614–1663) wrote a short piece of advice on military matters. Haller had spent five years abroad and was familiar with modern military developments, so he knew the strengths and weaknesses of his fellow Transylvanians. Haller describes how to array and use a Transylvanian formation in 16 brief instructions.

First, and clearly foremost in his mind, Haller concludes that two units of levies, especially of the nobility, never should be deployed next to one another. Instead, the levied units should be stiffened by being deployed with enlisted professional or Székely units on either side. Although Haller did not spell it out, the implication is obvious: the levies were prone to flee, and if one fled, so would the other.

Second, and following this line of thought, Haller advises that units on foot at all times should be deployed next to a cavalry unit. Again, we can assume that this instruction implies that the foot units were more likely to flee if the battle went against them. In addition, when deployed next to one another, the foot and horse could provide mutual support.

Third, the main force (Hungarian: *dandár*) should consist of cavalry and be the largest unit. Haller also advises that experienced cavalrymen should be deployed on the unit's flanks. As for units armed with firearms, they should be deployed in the middle and on the flanks of the line. Later, Haller also points out the need for the army's wings to have units of sufficient strength and size.

Haller emphasises the need for reserves. The reserves should be strong but not too large in numbers. He advises that the army should position two lines of vanguards in front of the main battle line, in order to provide a screen for the main force.

Incidentally, Haller observes that a large army is no good, because it cannot manoeuvre fast enough. However, he also notes that large armies are required against the Ottomans more than any other nation, as they always come in great numbers.

Haller advocates ambushes, if the terrain allows, and the deployment on hills. He advises the use of a wagon fort (*tábor*) as protection for the camp. Finally, Haller reminds his readers that horses require water and rest, and that any valuable property in the area of operations must be safeguarded.[2]

A number of conclusions can be drawn from Haller's 16 brief instructions. First, the cavalry mostly lacked firearms. For this reason, they required support from infantry armed with such weapons. Transylvanian infantry were all musketeers, serving as haiduk irregulars or, in some cases, Trabant guardsmen or dragoons. As a result, they primarily served in a support role to the cavalry. However, since the infantry units lacked pikes, they needed the flank support of experienced cavalry. Second, it is obvious from Haller's instructions that Transylvanian infantry functioned best in defensive positions, in favourable terrain, or in fortresses.

---

[2] Gábor Haller, 'Az sereg rendelésről' [About deploying the army], Károly Szabó (ed.), 'Haller Gábor naplója 1630–1644', *Erdélyi Történelmi Adatok* 4 (1862), pp.101–2.

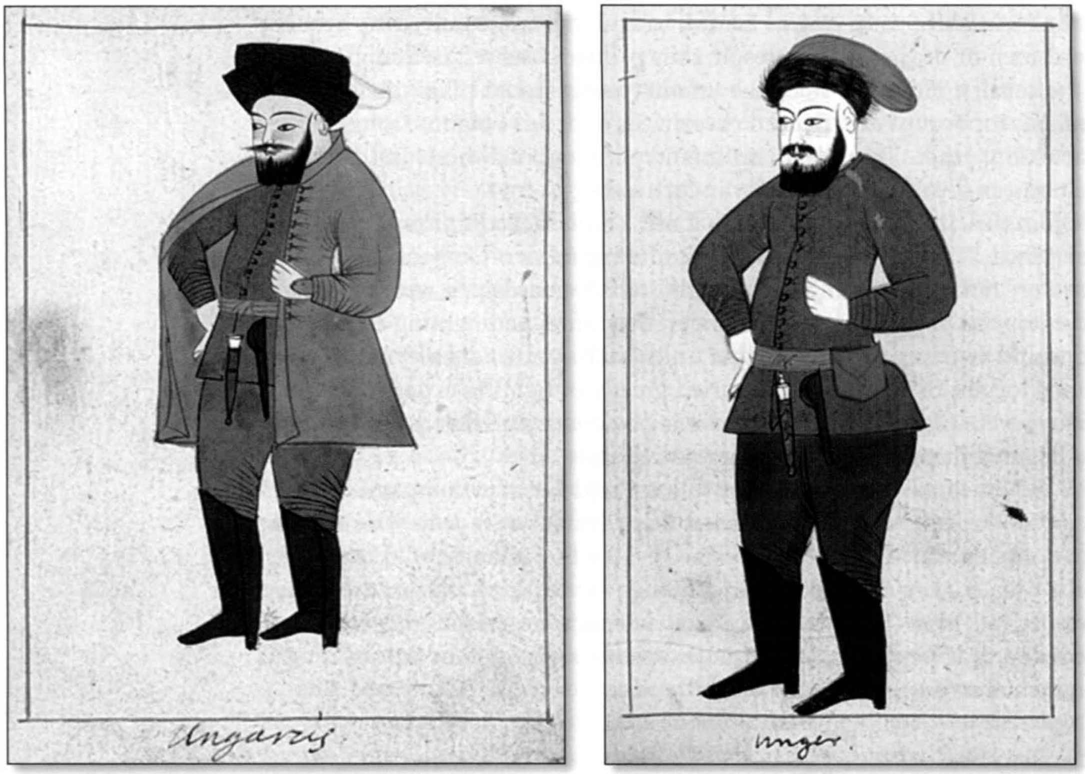
From this, it can be concluded that most units lacked training and battle experience. With the exception of the limited number of Trabant guardsmen, they were not standing units. Although Trabant guardsmen were organised and equipped in the traditional manner, they often had fighting experience and would be trained soldiers. Other units, such as existed, only occasionally trained locally, or not at all, and varied greatly in fighting experience. Most infantry were of Székely origin, and it is obvious from Haller's instructions that he rated them higher than other native units.

A key exception was provided by the enlisted German companies, which except for the Trabant guards provided Transylvania's only units which under certain circumstances might be described as standing units. The German units, which usually were enlisted abroad although some individuals in them may have derived from Transylvania's Saxon towns, were armed and organised as cavalry, dragoons, musketeers, and sometimes pikemen in the customary Continental style.

Arms, Armour and Dress

Nobles were expected to serve as hussars. Unsurprisingly, a Transylvanian hussar was armed in a similar manner to a Commonwealth hussar – since both the Commonwealth and Hungary had adopted the hussar soldier type from Serbia and the evolution of hussars had progressed in parallel in the two countries until the end of the sixteenth century. In the seventeenth century, as we have seen, the Commonwealth hussar, like other Commonwealth cavalry, acquired more elaborate armour and grew increasingly heavier than his Transylvanian equivalent. However, his Transylvanian counterpart did not abandon armour altogether. He customarily wore a helmet of Ottoman type, a chainmail shirt, metal cuirass, and vambraces. His main weapon was the long lance, about 3.5 to 4 m long and accordingly somewhat shorter than the Commonwealth variety, but like his Commonwealth equivalent, the Transylvanian hussar also carried sidearms: a sabre, war hammer, and a long backsword or palash (Hungarian: *pallos*, 'sword') fastened under the saddle. In addition, a few carried a firearm of some kind, perhaps a wheellock pistol or carbine. Not all nobles served as hussars. Poor nobles lacked the means to provide themselves with chainmail and essentially showed up as light cavalrymen. Sometimes they lacked lances as well.

Haiduk cavalrymen served primarily as irregular light cavalry. Unarmoured or mostly unarmoured, the majority were armed with lance, sabre, and the occasional firearm, which sometimes was a flintlock, presumably of the snaplock or snaphance type. There was little difference between the better-armed enlisted haiduk cavalry and the poorer noble



Above: Transylvanians in Hungarian dress, from drawings in the Album of Costumes acquired in Constantinople in 1657–1658 by Swedish envoy Claes Brorson Rålamb.

hussars. Those who served without lance were generally limited to the light cavalry role.

Haiduk irregular light infantry were typically armed with muskets and a preferred sidearm, typically a sabre but sometimes an axe, or both. Some poor infantry carried spears instead of firearms.

Moldavian and Wallachian light cavalry were primarily armed with the composite bow and a sidearm, usually a sabre.

Trabant guardsmen were armed similarly to other troops, only better so. Most were musketeers, with sabres as sidearms. Officers commonly carried war hammers.

Until 1526 Transylvania had been part of Hungary, so Transylvanian dress was primarily Hungarian in style. Hungarian dress customs, in similarity to many other garment styles in the region, to a significant extent derived from Inner Asian and Ottoman patterns. Transylvanian dress was based on the *dolman*, a caftan-like garment of Ottoman origin (Turkish: *dolama*) the front of which closed with large, often round or elongated buttons fastened in string hoops. The dolman fastened with a belt around the waist. The dolman had tight sleeves, closed with buttons or clasps at the hand, the back of which was covered by a characteristic elongated cuff (known as a 'dog's ear'). The waist belt might be knotted or a sash made of textile strips. The length of the dolman varied, with most probably being knee-length while the wealthy wore a longer variety.

Those who had the means wore a *mente* over the dolman. This was a garment of similar shape as the dolman, but worn over it as a coat. The mente came in a variety of types, some with long sleeves, others with short. A noble's mente was often trimmed with fur, with wolf fur being particularly popular.

Trousers were tight, closed around the ankles with buttons or hidden hooks and eyelets.

Shirts were made of flax, linen, or silk for those who had the means. Ottoman linen shirts were particularly popular.

On the head, each man would wear a fur or felt cap, often decorated with a couple of feathers, eagle if possible, or a plume.

Boots were commonly long and soft, in the Ottoman style with iron heels. Some instead wore narrow boots fastened with laces on the side. Infantrymen commonly wore sandals over feet wrapped in cloth or slipper-like garments, in either case tied in place with leather straps.

Poor soldiers, and in particular the free haiduks, often would have to settle for a sheepskin jacket instead of a mente.

Many Transylvanians shaved their heads and chins but wore long moustaches in the Tatar and Ottoman manner.

Trabant guardsmen wore uniforms issued to them. The uniform was, as far as is known, either a red or blue dolman, depending on local tradition and, we can assume, availability of cloth. Trousers and other garments were not issued in uniform colours. The Prince's household infantry wore blue uniforms, at least in previous times and presumably during the Deluge, too. Székely infantry seems to have had a tradition of wearing red garments.

The Saxon burgher militias wore clothes fundamentally of German style, although Hungarian styles were very common among them as well. Black clothing was traditional and may still have been common.

As for the enlisted German units, they were armed, equipped, and dressed in the customary Continental manner.

Banners and Music

There seems to be little if any preserved details on Transylvanian flags during the Deluge. Common heraldic signs at the time included the eagle, the sun-and-crescent (literally, waxing moon), and perhaps the Báthory family's wolf teeth. It is likely that each town already had its distinctive flags, perhaps in the manner of its seal. Presumably, Transylvanians incorporated styles from both Habsburg and Ottoman sources in their flags, but little is known of this. Certainly, such influences are evident from Transylvania's military music, which included trumpets, drums, and kettle-drums (always used in pairs, one of lower and the other of higher pitch). The cavalry used trumpets and kettle-drums, while the infantry used shawms, Ottoman pipes, bagpipes, and drums.

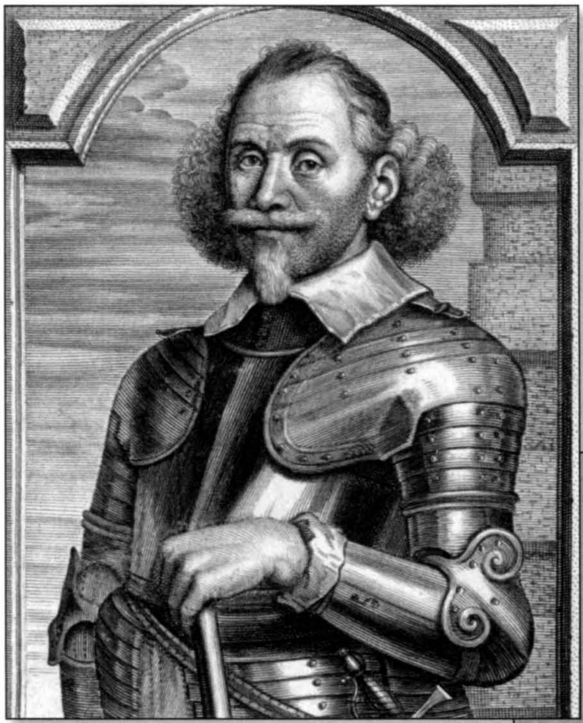
8

The Imperial Army During the Deluge

The Imperial army was second to none in experience as well as technical and scientific prowess. It had learnt from the Swedish adversary during the Thirty Years' War, adopted such aspects of the Swedish model which had proven its utility, yet retained those aspects of the Imperial military tradition which remained of value in modern warfare.

In 1656, Emperor Ferdinand decided to send an expeditionary force of 4,000 men in support of the Commonwealth. For various reasons, it did not set out. After Transylvania's entry into the Commonwealth as a Swedish ally in early 1657, the Emperor raised this number to 12,000 men. Moreover, this time the expeditionary force (Table 14 – see end of chapter) moved into the Commonwealth to assist in fighting the Swedes and their allies. The Imperial expedition was led by Field Marshal General Melchior von Hatzfeldt (1593–1658), a veteran of the Thirty Years' War who repeatedly had fought Swedish armies. In the Commonwealth, Hatzfeldt operated outside the Commonwealth chain of command (such as it was), subordinated only to King John Casimir himself. Ultimately, more Imperial units moved into the Commonwealth than the Poles had expected, with total numbers reaching at least 15,000 to 17,000 or possibly even 18,000 men. Many Commonwealth nobles believed that the only reason for their entry was to make the Commonwealth pay for their lodgings and supplies – in effect the same policy which Sweden employed when moving units abroad. Yet, the Commonwealth had agreed to supply the Imperial units, because it needed their military expertise, in particular in siege warfare. The first task of the Imperial expeditionary force was the 1657 siege of Cracow. Under the subsequent Emperor Leopold, Imperial regiments engaged Swedish forces in Denmark and Swedish Pomerania as well.

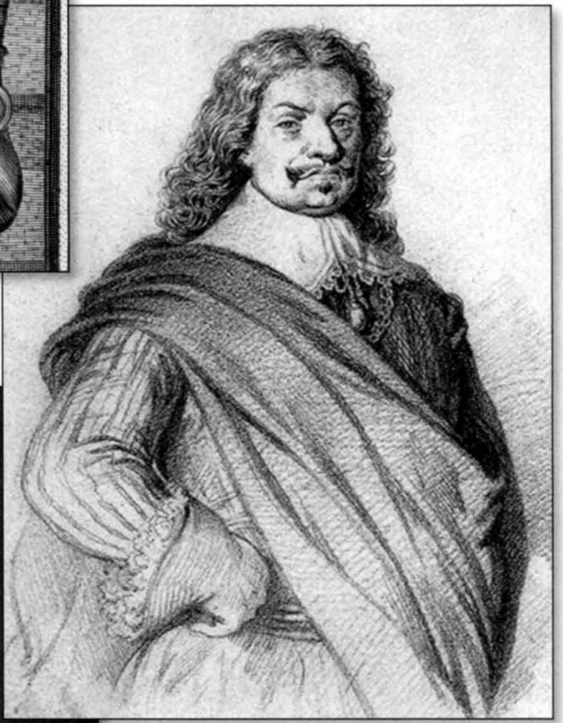
With Hatzfeldt went two other experienced and renowned Imperial officers: Field Marshal Lieutenant Raimondo Montecuccoli (1609–1680) and General of Cavalry Jean-Louis Raduit de Souches (1608–1682). An Italian veteran of the Thirty Years' War, Montecuccoli had, while in Swedish captivity, written an influential treatise on the art of war. Souches was a French Huguenot veteran of the Thirty Years' War who after deserting from

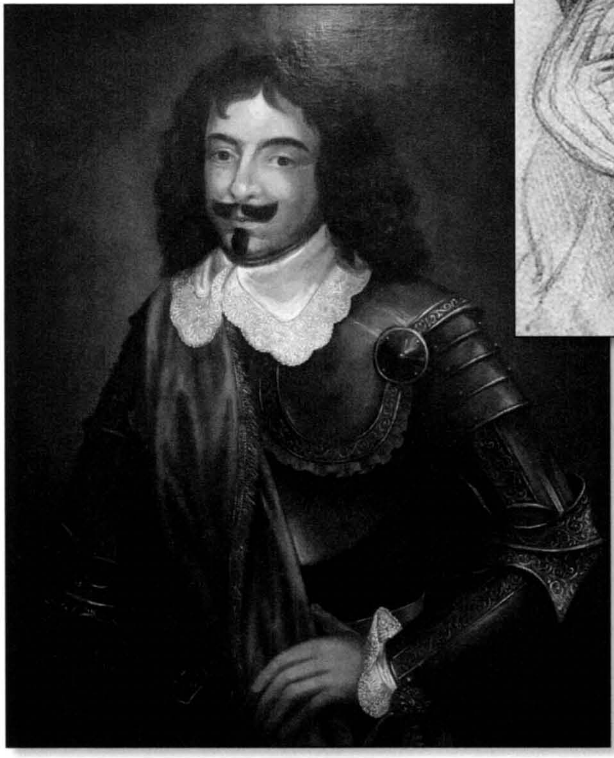


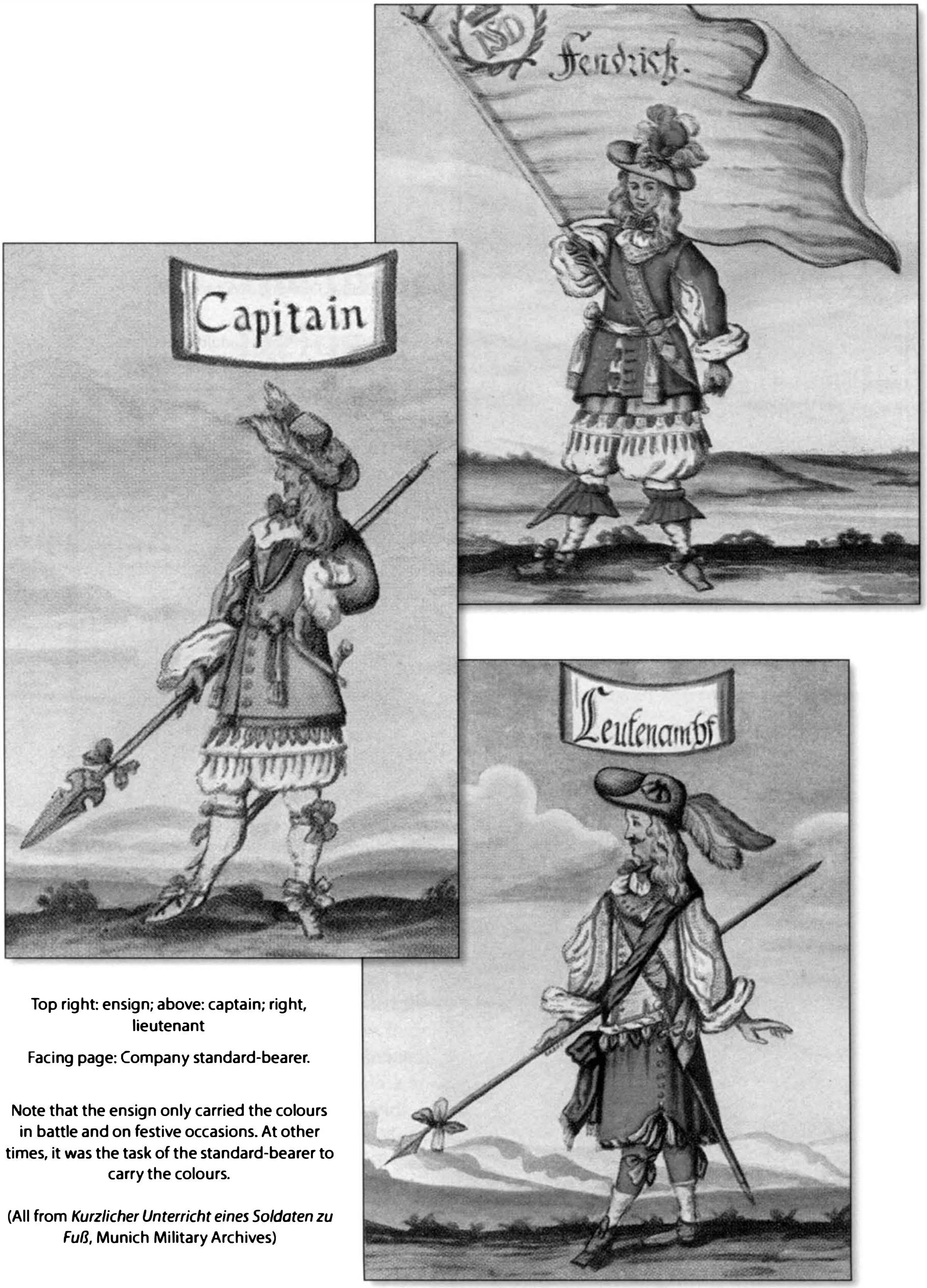
Left: Melchior von Hatzfeldt.

Below: Raimondo Montecuccoli.

Below left: Jean-Louis Raduit de Souches.





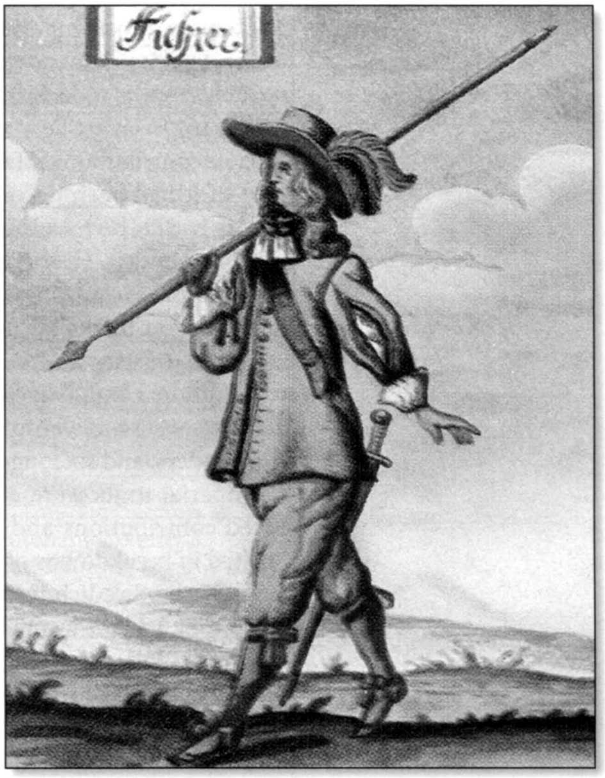


Top right: ensign; above: captain; right, lieutenant

Facing page: Company standard-bearer.

Note that the ensign only carried the colours in battle and on festive occasions. At other times, it was the task of the standard-bearer to carry the colours.

(All from *Kurzlicher Unterricht eines Soldaten zu Fuß*, Munich Military Archives)



Swedish service for challenging a superior officer to a duel, when duels were illegal, had gone into Imperial service.

Hatzfeldt soon fell ill, dying on his personal estate in January 1658. Montecuccoli then assumed command. However, in autumn Montecuccoli and most Imperial units redeployed to the war in Denmark. Souches then assumed command of the Imperial expeditionary force in the Commonwealth, where he commanded the Imperials during the siege of Thorn. He also led the Imperial attack on Swedish Pomerania in 1659. By then, only a few Imperial units remained on Commonwealth soil.

Unsurprisingly, the Imperial army employed forms of organisation and types of tactics of the Continental model. It had learnt its lessons from the Thirty Years' War and copied many aspects of the Swedish model. Although the Imperial army had been much reduced after the Thirty Years' War, it remained a formidable and very experienced fighting force.

The Imperial army's premier type of fighting unit was the cuirassier regiment (*Cürassier-Regiment*). By this time, all Imperial cavalry regiments were known as cuirassiers, even though they no longer wore heavy armour .Most cuirassier regiments consisted of eight companies and a staff unit, but many had fewer companies, sometimes only six or seven, while yet others were reinforced to nine to 10. A cuirassier regiment might also include an attached dragoon company in the Swedish manner. The establishment strength of a cuirassier company was similar to that of a Swedish cavalry company, or about 100 men. Most cuirassiers wore helmets and armour (breastplate and backplate). However, some had already abandoned all armour and instead wore only a buff coat. They were armed with a rapier and a pair of pistols.

Each cuirassier regiment sent to the Commonwealth was ordered also to enlist one dragoon company, as a means to reinforce the two new dragoon regiments raised for the campaign. However, in similarity to the Brandenburg cavalry regiments, some cuirassier regiments continued to field an attached dragoon company or two throughout the campaign. Dragoons were armed as musketeers and fought on foot, even though they moved mounted on horseback.

Since the expeditionary force expected to engage in sieges, it also included a significant infantry component. An infantry regiment was expected to field 10 companies and a staff unit, out of which the regiment formed two battalions. However, many regiments of the expeditionary force included only six companies. Infantry companies had an establishment strength of 204 men. However, in similarity to the Swedish and Brandenburg armies, understrength units were common. The infantry consisted of pikemen and musketeers. Most Imperial pikemen had abandoned their armour, similarly to the Swedes. Musketeers were armed with matchlock muskets. Some musketeer units used fork rests, while others had abandoned their use.

The Imperial artillery was both strong and experienced, which made it a valuable contribution to the remnants of the Commonwealth artillery. However, most of it had been decommissioned after the Thirty Years' War, so retired officers had to be recalled to duty. In 1656, a field artillery was formed with two 24-pounders (German: *Halbkartaune*), four long-barrelled 6-pounders (German: *Viertelschlange*), two falcons (German: *Falkon*; a long-barrelled cannon larger than a falconet), 12 3-pounders (regimental artillery), and two 60-pound mortars. In 1656, when the unit deployed to Silesia, it also received two additional long-barrelled 6-pounders, two falcons, and 100-pound mortar. There were also plans to add a siege artillery of three 48-pounders, nine 24-pounders, and six long-barrelled 6-pounders.[1]

Imperial units were efficient and well-trained. However, they lived on forced contributions and plunder in the same way as other armies, which resulted in breakdowns of discipline, and so the Imperials were often equally hated as the Swedish, Muscovite, Tatar, or for that matter any other army which took what it wanted.

There is little surviving information on Imperial uniforms in the wars of the Deluge. The French envoy to Brandenburg, Jean (Johann) Frischmann, saw the Imperial army in Denmark in 1658–1659: 'The Imperial troops consisted of 6,000 horse, very well mounted and equipped with carbines and pistols, all old cavalrymen who had served the Emperor for years … In addition to this fine cavalry, there were about 5,000 infantrymen, all dressed in red cloth.'[2] Since some of the Imperial units in Denmark came from the Commonwealth, we can conclude that red infantry uniforms remained common in Imperial units there as well.

Tables

Table 14 (see p.236). The Imperial Expeditionary Force, 1657

Source: primarily Wrede, *Geschichte*

Note that in addition to the units in the table, the Imperial expeditionary force included several unattached enlisted companies. Incidentally, unlike the cavalry and dragoon regiments of the Imperial expeditionary force, which disbanded after the Deluge (although sometimes many years later), two infantry regiments remained in service in the Imperial army until the 1918 dissolution of Austria-Hungary itself: De Mers's Regiment, established in 1629, ultimately became the 11th Bohemian Infantry Regiment; while Starhemberg's Regiment, established in 1642, ultimately became the 8th Moravian Infantry Regiment.

---

[1] Hedberg, *Kungl. Artilleriet: Carl X Gustafs tid*, p.124.

[2] Based on Daniel Staberg, 'Brandenburgers, Imperialists and Poles in Denmark' (*Kriegsbuch* blog, 2012 <www.kriegsbuch.blogspot.com>).

Cuirassier Regiments
Julius Braida's Cuirassier Regiment, under himself (regiment originally founded by Hannibal Gonzaga)
Ludwig Hieronymus von Caprara's Cuirassier Regiment, under Lieutenant Colonel Johann Ehrenreich Sonau (also known as the late Ottavio Piccolomini's Cuirassier Regiment)
Johann von Sporck's Cuirassier Regiment, under Lieutenant Colonel Hans Wilhelm Freiherr Zobel von Giebelstadt
Johann Heinrich Garnier's Cuirassier Regiment, under Lieutenant Colonel Boxtorff
Jacob von Salis's Cuirassier Regiment (Salis fell at Stettin in 1659 after which his Lieutenant Colonel Peter von Planta took over the regiment)
Bogusław Leszczyński's Cuirassier Regiment, under Lieutenant Colonel Johann Adam Garnier
Joachim von Ratschin's
Sigmund von Götz's Cuirassier Regiment, under Lieutenant Colonel Heinrich Thiel Degener von Degenheimb (the original founder, Johann von Götz, had fallen at Jankow in 1645, after which the regiment was commanded by Montecuccoli and La Corona until the end of the Thirty Years' War)
Gottfried von Heister's Cuirassier Regiment, under Lieutenant Colonel Otto Wilhelm von Berlepsch
Jobst Hilmar von Knigge's Cuirassier Regiment, under himself
Dragoon Regiments
Johann Flettinger's Dragoon Regiment, under himself
Paris von Spankau's Dragoon Regiment, under himself
Infantry Regiments
Johann Reichard Starhemberg's Regiment, under Lieutenant Colonel Van der Ehr
Margrave Hermann of Baden's Regiment
Franz von De Mers's Regiment
Conti's Regiment
La Corona's Regiment
Jacques's Regiment
Ranfft's Regiment
Humoldstein's Regiment
Nicola's Regiment
Johann Franz von Kaiserstein's Regiment
Artillery
Commanded by Friedrich Weidlinger

9

The Crimean Khanate's Military Establishment

We have already seen that significant influences from the old Mongol model of warfare still lingered in Eastern Europe, in particular in Muscovy but also within the Commonwealth and among the Ukrainian cossacks. However, the Mongol tradition was nowhere more obvious than within the Crimean Khanate, which like Muscovy was a successor state of the Mongol Empire but retained yet more of its traditions.

The Mongol Empire established by Genghis Khan in the early thirteenth century dominated a vast share of Eurasia, so it was unsurprising that over time, the Empire gradually fragmented into a number of successor states. At the same time, the Empire grew increasingly Turkic in language and customs. The north-western part of the Empire later in the century became a separate khanate, known as the Qipchaq Khanate, the Ulus of Jochi, or most commonly, the Golden Horde. In the fifteenth century, the Golden Horde fragmented, too. Out of it emerged the Kazan' Khanate (1438), the Crimean Khanate (1441), and the Astrakhan' Khanate (1466). The rest became known as the Great Horde (*Ulugh Orda*), based on the steppe between the Rivers Dnieper and Yaik (Ural). In 1502, the Crimean Khanate allied with Muscovy, and the two defeated the Great Horde which henceforth fell under the dominion of the Crimean Khanate. Henceforth, the Crimean Khans of the ruling Geray dynasty referred to themselves, and in diplomatic discourse were addressed by others, as the Khans of the Great Horde.[1] Regarding itself as the prime successor of the Mongol Empire, the Crimean Khanate demanded and received the traditional Mongol imperial tribute from both the Commonwealth and Muscovy. At first, it seemed that the Crimean Khanate would expand further, and perhaps in new directions. The Crimea provided a sedentary infrastructure, with towns and ports, through which the Khanate developed maritime trading links with the Ottoman Empire and other nations.

---

[1] Since the Khanate archives were destroyed or dispersed already in the eighteenth century, we have to rely on surviving documents only, together with the descriptions of foreign visitors, for our knowledge of Khanate titles and organisation. This is further complicated by the fact that most or all surviving archive documents are written not in Crimean Tatar, but Ottoman Turkish, which borrowed extensively from Arabic and Persian. For this reason, some uncertainty remains with regard to the names of many Tatar institutions. Incidentally, this also complicates the transliteration of Tatar names, since some scholars base the transliteration on Ottoman records, while others follow one of several Tatar orthographic styles.

Unfortunately for the Khanate, the introduction of artillery and other gunpowder weapons impacted badly on the traditional nomad way of warfare.[2] Muscovy expanded further, annexing the Kazan' Khanate in 1552 and the Astrakhan Khanate in 1556. By the time of the Deluge, the Crimean Khanate remained a major regional power, and while it still received tribute from the Commonwealth and Muscovy, the tribute obligations were the result of historical grandeur, not imperial might. The Khanate was no longer expanding its power. Although the Crimean Tatars remained a serious military threat to its neighbours, this was only because the Crimean economy depended on the acquisition by raiding of captives which were then sold as slaves. While nomad raiders were eminently suitable for such endeavours, the Khanate no longer had the ambition to conquer and hold territory. Nor had it been able to adopt more up-to-date types of weapons, tactics, or forms of organisation.

This was also obvious in the Crimean Khanate's relations with the Ottoman Empire. For quite some time, the Khanate had served the Ottoman Empire as a client state. While this status had not yet prevented the Khanate from following an independent political course, even this relative freedom was rapidly coming to an end. It would not take long before the Khanate was no more than a vassal of its Ottoman overlords.

The military establishment of the Crimean Khanate, like that of Muscovy, ultimately derived from the Mongol military model of the Middle Ages. Traditionally, highly mobile horse archers constituted its primary component, stiffened by heavy cavalry. By the time of the Deluge, light cavalry remained very common. The Khanate still fielded some heavy cavalry, based on the Tatar nobility, but their share of the total was much lower than in Muscovy, since the Khanate's warfare focused on raiding, not conquest. Paradoxically, Muscovy's military system remained truer to the traditional Mongol model than that of the Khanate, even though the Geray family which ruled the Khanate descended from Genghis Khan.

This meant that the Khanate's military forces employed forms of organisation and types of tactics which differed radically from the Continental model.[3] The time of the equestrian nomad horse archer was almost over, but unlike Muscovy, the Khanate had failed to adapt to the changes in technology and the circumstances of war.

---

[2] Michael Fredholm von Essen, *Nomad Empires and Nomad Grand Strategy: The Rise and Fall of Nomad Military Power, c. 1000 BC–AD 1500* (Stockholm: Stockholm University, Asian Cultures and Modernity 9, 2005). See also Michael Fredholm von Essen, 'Gunpowder and the End of Nomad Military Power: The Military Revolution That Really Mattered', *Arquebusier* 28: 5 (2005), pp.2–9.

[3] The most easily accessible English-language treatise on the Crimean Tatar military system remains Leslie J.D. Collins, 'The Military Organization and Tactics of the Crimean Tatars During the Sixteenth and Seventeenth Centuries', Vernon J. Parry and Malcolm Edward Yapp (eds), *War, Technology and Society in the Middle East* (London: Oxford University Press, 1975), pp.257–76. Military information, although relating to a somewhat earlier period, is included in Halil İnalcık (who was a Turkish historian of Crimean Tatar origin), 'The Khan and the Tribal Aristocracy: The Crimean Khanate under Sahib Giray I', *Harvard Ukrainian Studies* 3/4, Part 1: *Eucharisterion: Essays presented to Omeljan Pritsak on his Sixtieth Birthday by his Colleagues and Students (1979–1980)*, pp.445–466; and Victor Ostapchuk, 'Crimean Tatar Long-Range Campaigns: The View from Remmal Khoja's *History of Sahib Gerey Khan*', Brian J. Davies (ed.),

Tactical Doctrines

On the battlefield, Crimean Tatar cavalry still fundamentally relied on Mongol tactics. Highly mobile horse archers were used for harassing slow-moving enemy forces. When confronted with enemy cavalry, the Tatar cavalry first aimed to engage with archery, then withdrew in feigned flight until the pursuing enemy could be attacked in the flank by another Tatar cavalry unit.

Traditional nomad tactics remained useful, up to a point. In 1656, a Tatar leader called Subhan Ghazi Agha advised King John Casimir, on the eve of a battle fought against the Swedes, that they should avoid a frontal attack, instead 'keep probing them, and exhaust them with sudden, sharp attacks'.[4] This was typical of Tatar tactics, or indeed any equestrian steppe nomad tactics, which emphasised the disorganisation of enemy forces by the use of skirmishers, simultaneous attacks at various points, feigned flights, and other means to soften up the enemy. Skirmishers were also used to drive off opposing scouts, thus denying the enemy information on the deployment, movement, and activities of the Tatar army. By this means, the Tatars could make sudden and unexpected attacks where the enemy was most vulnerable.

When finally charging the enemy, the Tatars would deploy in a half-moon formation, about 40 men broad, with their leaders placed at the front, rear, and flanks. During the charge, the Tatars would yell and ululate.

Like many other equestrian nomads, the Tatars feared musket fire and, in particular, artillery fire. By the time of the Deluge, they had grown accustomed to musket fire. However, artillery remained a problem, since the range of even field artillery greatly exceeded the range of Tatar archery. As a result, field artillery could be used to deny a Tatar army the opportunity to attack.[5]

Moreover, the Crimean Tatar lack of heavy cavalry suddenly became acute when in the mid seventeenth century the Crimean army found themselves confronting Kalmyk Mongols in Muscovite service. The Kalmyks had abandoned neither their armoured cavalry, nor their lances, and they had just as good and mobile horse archers as the Crimeans. Moreover, the Kalmyks had added muskets to their weapons package. The light Crimean horse archers had nothing with which to oppose the Kalmyks.

Nonetheless, the composite bow remained the chief Tatar weapon. In the early 1630s, Guillaume Le Vasseur de Beauplan noted that the similar Polish

---

Warfare in Eastern Europe, 1500–1800 (Leiden: Brill, 2012), pp.147–71. In Russian, there is, based on early Muscovite diplomatic sources, V.E. Syroyechkovskiy, 'Mukhammed-Geraj i ego vassaly', *Uchenyye zapiski Moskovskogo gosudarstvennogo universiteta* 61 (1940), pp.3–71.

[4] Collins, 'Military Organization and Tactics', p.269.

[5] The Tatar inability to withstand artillery fire was a factor at the 1651 battle of Berestechko, in which a Commonwealth army decisively defeated a combined Tatar-cossack army. Anon. [Chevalier], *Discourse*, p.147; Ocakli, *Relations*, pp.208–10.

bow had a range of over 100 paces.[6] Most shooting would take place at close range, with the Tatar horse galloping past the enemy line. However, there was a way to achieve a greater range than this. While travelling across the Ukrainian steppe, Beauplan was attacked by Crimean Tatars. He reported that the Tatars could shoot accurately up to 60 or 100 paces (by which he most likely meant about 50 to 90 metres). Beauplan also made the following observation:

> I have encountered them many times in the country to the number of a good five hundred Tatars who wished to attack us in our tabor [wagon fort], and even though I was accompanied by only fifty or sixty cossacks, they could do nothing to us nor could we best them because they would not approach within the range of our weapons; but after making numerous feints to attack us and trouble us with clouds of arrows on the head because they shot in arcade easily at twice the range of our weapons, they retired ...[7]

Shooting in arcade is to shoot at a steep angle, of about 45 degrees, to extend the range as far as possible. The result is that the arrows drop almost vertically on the target, as indeed Beauplan makes clear. Such shooting is of course very inaccurate; however, a massed enemy of the type the horse archers often confronted was very vulnerable to such archery.

A sixteenth-century Arabic treatise on archery confirms the range of archery mentioned by Beauplan, pointing out that while the extreme range for accurate fire is 45 bow lengths, the range for effective (in penetrative power) although frequently inaccurate fire is more than twice this.[8] In the fourteenth century, the Egyptian Mamluks were expected to hit a circle somewhat less than one metre in diameter at a range of 60 bow lengths.[9] Again, we can assume that the range for effective but inaccurate fire was longer.

Political and Military Organisation

The political and military structure of the Crimean Khanate resembled those of earlier steppe khanates, although with some additions due to the agricultural lands, towns, and ports in the Crimea itself.

The Khan functioned as supreme commander. He had two deputies, one senior and one junior. The senior deputy was the Qalgha Sultan, who was next in the line of succession and functioned as the Khan's deputy in military matters. He usually but not invariably was one of the Khan's brothers and also administered the Khan's estates in the eastern region of the Crimean Peninsula.

---

[6] Beauplan, *Description*, p.48.

[7] *Ibid.*, pp.95–6.

[8] N.A. Faris and R.P. Elmer (eds), *Arab Archery: An Arabic Manuscript of About A.D. 1500: A Book on the Excellence of the Bow and Arrow and the Description Thereof* (Princeton: Princeton University Press, 1945). The translators interpret 45 bow lengths as about 75 metres, which seems excessive. See the following note.

[9] J.D. Latham and W.F. Paterson, *Saracen Archery: An English Version and Exposition of a Mameluke Work on Archery (ca. A.D. 1368)* (London: The Holland Press, 1970), p.138. The translators interpret 60 bow lengths as about 75 m, which suggests a bow length of 1.25 m. However, elsewhere the Mamluk bow is recommended to be of the same length as the arrow and correspond to the length which the archer is able to draw, which suggests a bow length of roughly 1 m.

Second to the Qalgha Sultan in rank was the Nureddin Sultan. He, too, was a member of the Khan's family and administrated estates in the western region of the Crimean Peninsula. Technically, he was second in the line of succession (although as we have seen, the Ottoman Empire occasionally interfered in succession issues, appointing its own candidate to the Crimean throne).

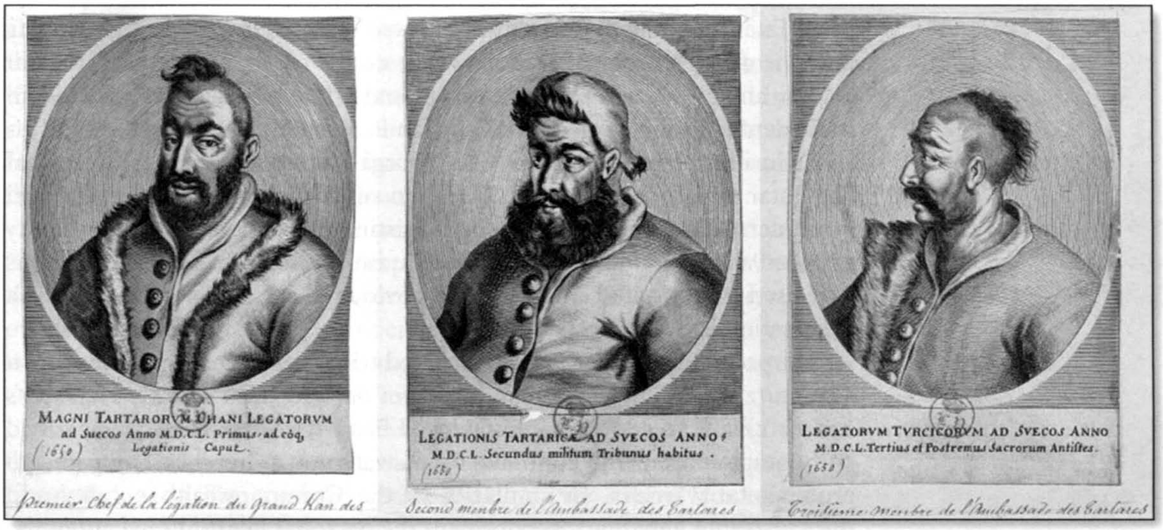
However, unlike in the old Mongol Empire, the Crimean Khan and his deputies did not enjoy absolute rule either in law or in fact. Instead, he had to take the chief members of the tribal aristocracy into account, in particular the tribal princes who headed the four to five dominant Tatar tribes in the Crimea. Each formally known as a Qarachi-Begh, they enjoyed considerable power.[10] In a manner oddly reminiscent of the Commonwealth but for wholly different reasons, the tribal aristocracy had imposed a number of restrictions on the Khan's power. In the Commonwealth, the nobles had imposed legal restrictions on the King to ensure their liberties. In the Khanate, the Qarachi-Beghs had simply reverted to the customary liberties of nomad chiefs before the old Mongol Empire established absolute rule – and they could do this because of the weakened state of the Khanate in comparison to its predecessors. This was in striking contrast to Muscovy, where the Tsar claimed, and usually was able to enforce, the absolute rule which he had inherited as a successor to the old Mongol khans.

The restrictions on the Crimean Khan mattered, because most Crimean Tatars lived in small communities under tribal chiefs or nobles. A number of communities constituted a tribe. Originally, the dominant tribes were four: the Shirin, Arghin, Barin, and Qipchaq.[11] However, by the seventeenth century, other tribes such as the Mansur (formerly Manghit) and Sijivut had gained power and challenged the status of the previous four. As a result, the Khanate henceforth recognised five dominant tribes: Shirin, Arghin, Barin, Mansur, and Sijivut. The Qipchaq tribe was no longer counted among them, which made sense since it no longer retained its old cohesiveness. Moreover, yet other tribes were growing in influence, in particular the Dayir, even though it was too weak to challenge the dominant ones. The standing of the tribe also determined where it would be deployed in the line of battle. The Ottoman traveller Evliya Çelebi (1611–1682) noted that the Shirin, which he claimed could raise an army of 20,000 cavalry, and the Dayir tribes deployed in the right wing of the army, while those of the Mansur and Sijivut deployed

---

[10] The meaning of the title is disputed. Begh (or Bey) means 'chief'. Qarachi may be the combination of the Tatar verb *qara-* ('to look; to watch') and the noun-forming suffix *-chi*, which would signify a 'watchman' or 'guardian'. If so, the title means 'chief guardian'. However, the Tatar verb *qara-* can also mean 'black' which may relate to the traditional Inner Asian use of the expression 'black bones' for lineages of less noble birth than the descendants of Genghis Khan, who instead were referred to as 'white bones'. If so, the title Qarachi-Begh means 'chief of a black-bone tribe'. Since the Geray descended from 'white bones', it would make sense if they, when at the height of their power, referred to their vassals of non-Genghisid origin as 'black-bone tribes'.

[11] The Shirin claimed an Iranian descent for which they sometimes referred to their origin as Nakhchivan. It is possible that they were the descendants of an Alan clan from the Caucasus.


MAGNI TARTARORVM CHANI LEGATORVM
ad Suecos Anno M.D.C.L. Primus ad cōq,
Legationis Caput.
(1650)
Premier Chef de la légation du Grand Kan des
LEGATIONIS TARTARICÆ AD SVECOS ANNO
M.D.C.L. Secundus militum Tribunus habitus .
(1650)
Second membre de l'Ambassade des Tartares
LEGATORVM TVRCICORVM AD SVECOS ANNO
M.D.C.L.Tertius et Postremus Sacrorum Antistes.
(1650)
Troisième membre de l'Ambassade des Tartares

Crimean Tatar envoys to Sweden, 1650. Mustafa Agha, the delegation's leader, is portrayed on the extreme left. The Khan requested an alliance against Muscovy. However, Swedish Queen Christina turned the offer down, stating that Sweden enjoyed peaceful relations with Muscovy. (*Theatrum Europaeum*)

in the left wing.[12] It follows that the Arghin and Barin would deploy in the centre, presumably together with the Khan's personal forces. Incidentally, the claim of 20,000 cavalry is almost certainly exaggerated, and evidence suggests that 5,000 was a more likely figure. Even during the Khanate's strongest periods, the total cavalry raised by the dominant tribes was likely no higher than 10,000.[13]

Each dominant tribe was led by one of the Qarachi-Beghs, each of whom owed fealty as a vassal to the Crimean Khan. Yet, the autonomy of the tribal princes manifested itself in several ways. First, they had to be persuaded, not commanded, to join the Khan when he went to war. Second, they claimed the right to go on raids even when the Khan had agreed to a peace treaty. As a result, experienced Commonwealth and Muscovite diplomats often attempted to negotiate peace treaties not only with the Khan but with the Qarachi-Beghs as well.

Finally, there were non-Crimean vassals. In particular the Noghai Tatars, a nomadic tribe from the steppes north of the Caucasus, often swore fealty to the Crimean Khan. They, too, regarded themselves as largely autonomous. Many Noghai had migrated into the Pontic steppe. Furthest to the west, in Bessarabia between the Rivers Danube and Dniester, was the Budjak Horde. The Noghai often sent contingents in support of the Khan of the Crimean Khanate.

The tribal components of the Khanate were mirrored in the organisation of the Khanate army, which was composed of a combination of a tribal levy of all Tatar men, the leaders of whom owed fealty to the Khan as his vassals, and the Khan's personal forces, which consisted of his retinue of Tatar cavalry and a small number of infantry and artillery which was raised from the sedentary population of the Crimean Peninsula.

---

[12] Sait Ocakli, *The Relations of the Crimean Khanate with the Ukrainian Cossacks, the Polish-Lithuanian Commonwealth and Muscovy during the Reign of Khan Islam Giray III (1644–1654)* (dissertation, University of Toronto, 2017), p.26 n.15; citing Evliya Çelebi, *Seyahatnâme*, Vol. 8 (Istanbul: Yapı Kredi Yayınları, 2003), pp.13–7. Evliya Çelebi's books offer many details of Tatar warfare, since he travelled with the Tatar army on several campaigns. However, much is exaggerated and only parts of his works exist in English. Most easily accessible are the two volumes of Evliya Efendi [Evliya Çelebi], *Narrative of Travels in Europe, Asia, and Africa, in the Seventeenth Century* (London: Oriental Translation Fund of Great Britain and Ireland, 1834 and 1850), tr. by Joseph Hammer-Purgstall.

[13] İnalcık, 'The Khan and the Tribal Aristocracy', p.448.

As in all Eastern steppe contingents, organisation was nominally decimal. The Tatar tribal forces were divided into small units known as *qosh* ('bird' in modern Tatar), each nominally consisting of 10 men. Each community supplied a certain number of *qosh*, depending on its size. The term *qosh* was also used for a nomad camp, so it is obvious that it was not an exact unit designation.[14]

The population of a tribe also included tribal nobles, each usually known as a *murza* or *mirza* (nobleman; the term derived from *emir-zadeh*, 'emir's son' or 'chief's son' in Arabic-influenced Persian). These were better armed and equipped than the common tribal warriors and can be compared to professional warriors. In similarity to the Commonwealth nobility and the Muscovite hereditary servicemen, the personal, martial capacity of the *murza* varied considerably, with those of a military bent being far more proficient than those who merely served to uphold family tradition and safeguard their herds and pastures. Although nomads, both nobles and common warriors, because of their lifestyle tended to be good fighters, they were not necessarily proficient in operating as a unit since they generally did not train in formation. Having said this, the irregular manner of fighting characteristic of light steppe cavalry did not really need formation training.

However, the Khanate army also included standing units. Most prominent were the retinues of the Khan, his relatives, and officers, as well as of the tribal princes (the Beghs). These retainers (Tatar: *oghlan*), 'young man') were recruited from nobles and proven fighting men and fought as heavy cavalry, sometimes as lancers.[15] In addition to service as fighting bodyguards, such retainers also acted as commanders of Tatar tribal units. Their number is believed not to have exceeded 500 men. In the Crimea, the Khan's retinue no doubt formed the basis of the palace guards (*qapiqulu*, 'door guards'; from Ottoman Turkish), who according to Evliya Çelebi, as always prone to exaggeration, numbered about 3,000 men.[16] The palace guards certainly served on foot in the palace, but those who accompanied the Khan on campaign served as cavalry.

There were also standing units which fought on foot. They always constituted the minor part of the army. The Khan maintained infantry in the Ottoman style (Tatar: *seghban*), armed with arquebuses or light muskets of the Ottoman type.[17] These musketeers, usually from 600 to 1,200 in strength and divided into small companies of mere platoon size, were raised from the agricultural villages in the Crimean Peninsula under the control of the Khan.[18] It is believed that they travelled on horseback, as mounted infantry, since they could not otherwise keep up with the speed of the Tatar army. However, there is no direct evidence on how they marched. On campaign, their number is believed not to have exceeded 400 men.[19]

---

[14] The original meaning of the Tatar term *qosh* is unclear; possibly it signified a family or migratory group. The term was adopted by the Ukrainian cossacks as *kosh* with the meaning of 'cossack community', for instance, *koshevoy ataman*, signifying a senior leader of cossacks.

[15] The Tatar *oghlan* eventually developed into the Commonwealth mounted lancer known as *uhlan* which also was adopted by other European armies.

[16] Babulin, *Bor'ba za Ukrainu*, pp.87, 88; apparently based on Polish records relating to a Tatar invasion force in 1649.

[17] The *seghban* was first formed after the fall, to the Ottomans, in 1475 of independent Gothia in the Crimea. A major part of the unit as it then was formed, and as it survived well into the sixteenth century, consisted of Crimean Goths. The last remnant of the ancient Germanic nation of this name,

The same can be said of the small force of Ottoman-style field artillery (*zarbuzan*). In fact, Ottoman expeditionary forces of regular Ottoman artillery and infantry including janissaries were occasionally sent in support of the Khanate army, when it operated on behalf of its Ottoman masters. When this happened, there was no difference between these units and other Ottoman regulars.

Finally, there was the supply train, which might be dispensed with when the objective of the mission was mere raiding. The Tatars mostly used two-wheeled ox carts (Tatar: *arba*) when operating on the steppe. However, carts were usually not brought along on the grand raids into the Commonwealth or Muscovy. Then supplies were instead carried on pack horses and camels to ensure mobility. Even so, the supply train always followed the army on major campaigns. The train carried all the necessities for a campaign including ‘artillery wagons’ (*zarbuzan ‘arabalari* or *top ‘arabalari*), ‘munitions wagons’ (*jebehane ‘arabalari*), ‘kitchen wagons’ (*matbah ‘arabalari*), and ‘provisions wagons’ (*zahire ‘arabalari*).The ‘artillery wagons’ could be deployed in a wagon fort (Tatar: *küren*) defended with light artillery.[20]

Raising Troops

The number of Tatar warriors has been debated for centuries. Generally speaking, the numbers given in contemporary sources are invariably highly inflated, not only for reasons of propaganda but because of Ottoman literary and bookkeeping practices. As a result of literary practices, the figure 40,000 frequently appears as the strength of this or that Crimean army. However, in the old Turkic languages the number 40 is an idiomatic expression which should not be taken literally and merely refers to very large quantities in a figurative sense. We can thus understand the figure 40,000 as ‘many

---

Gothia outlasted the Eastern Roman (Byzantine) Empire for 22 years. Over time, its inhabitants merged with the Tatars until by the time of Deluge very few still had some knowledge of their ancient language and the Christian religion. Michael Fredholm von Essen, *The Goths 2: From Alaric to Theoderic the Great and Beyond* (Society of Ancients, 2021).The term *seghban* derived from Persian but was adopted into Ottoman Turkish as *sekban* with the meaning of irregular soldier.

[18] The Crimean musketeers were also known, in Ottoman Turkish, as *tüfenkchi*, from *tüfenk*, ‘hand-carried gun’.

[19] Babulin, *Bor’ba za Ukrainu*, p.87. In the early 1560s, the Imperial ambassador to Constantinople reported that 800 would join a Tatar expedition. Charles Thornton Foster and F.H. Blackburne Daniell (eds), *The Life and Letters of Ogier Ghiselin de Busbecq* (London: Kegan Paul, 1881), p.356.

[20] V.V. Penskoy, ‘Voyennyy potentsial krymskogo khanstva vo kontse XV – nachale XVII v.’, *Vostok (Oriens)* 2, 2010, pp.56–66. While *arba* is a Tatar term, the specialist terms for military wagon types were heavily influenced by Ottoman Turkish.

thousands'.[21] Bookkeeping practices were at fault, too. Archive documents reveal that Ottoman sources regularly overstated their Tatar troops when campaigning against Persia, claiming 30,000 to 40,000 men when the real number ranged from 5,000 to 10,000.[22]

Most Crimean armies included vassals and allies, at times including Ottoman contingents, which compounds the difficulty in estimating numbers. When these are included in the total, many estimate that Crimean Khans in the second half of the sixteenth and first half of the seventeenth century might have been able to field an estimated 40,000 to 60,000 men. Unfortunately, these figures, which fundamentally are based on contemporary chroniclers (Ottoman, Muscovite, and others), far exceed the total estimated population of the Crimean Khanate. The nomad lifestyle demands significantly more territory per capita than a sedentary, agricultural society. Although the figures have been hotly debated, modern research suggests that the territory under Crimean Tatar control could not have supported more than some 25,000 to 30,000 nomads.[23] On the other hand, by tradition every nomad male was a warrior, and it was customary to call up all available men, leaving the women to tend to the herds when the men went raiding. Such methods, as we have seen, were archaic in comparison to mobilisation systems in the agricultural countries to the north. Moreover, from the late sixteenth century onwards, an increasing number of Tatars took up agriculture. Although some retained a pastoral lifestyle, others settled down as peasants. This enabled the support of more people per territorial unit, but the fighting ability and mobilisation speed which characterised nomad society decreased accordingly, and was ultimately lost altogether. Those Tatars who had converted to an agrarian lifestyle often owned no horses. When called up, they then had to rent horses from their tribal chiefs or local merchants, or as an alternative and if they had the means, pay a special tax in lieu of military service. If horses were unavailable for any reason, or they lacked the funds to pay, they had to fight on foot. Since this precluded them from playing any useful role in the grand raids, over time this led to a decreased military capability, even if the number of available men to some extent grew.

For these reasons, it seems reasonable to assume that although the Crimean Khanate, under the best of circumstances, possibly might raise a total military force of up to 40,000 men including vassals and allies, most Crimean contingents would be much smaller, probably from 5,000 to 10,000 just like those contingents which were sent on distant campaigns under Ottoman control. The military forces raised at the time of the Deluge, to the extent that the numbers can be assessed, support this conclusion. We will see that an army personally led by the Khan would not consist of more than 30,000 men (and very likely less), while those armies and expeditionary forces led by princes would, at most and only in exceptional cases, reach a strength of 15,000 to 20,000 men and would be far more likely to consist of no more than 5,000 or 6,000 men.

---

[21] For a Western audience, the most well-known use of 40 as an idiomatic expression is found in the tale of Ali Baba and the 40 thieves.

[22] Özer Küpeli, 'Campaigns of the Crimean Tatars and Ottomans against Iran', *Zolotoordynskoye obozreniye* (*Golden Horde Review*) 2: 4 (2014), pp.226–42.

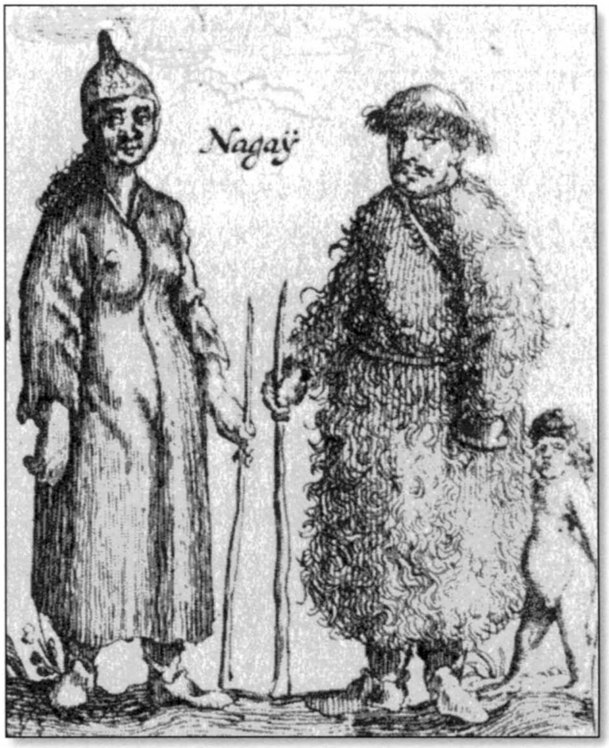
[23] Penskoy, 'Voyennyy potentsial', pp.56–66. For a recent English-language discussion on Tatar manpower, see Ocakli, *Relations of the Crimean Khanate*, pp.105–7.

Arms, Armour and Dress

Crimean Tatars did not look very different from other Turco-Mongol nomads. The French observer Beauplan mentioned that they were not very tall, and even the tallest among them were no taller than Europeans of average height. Moreover, Beauplan described them as still Oriental in appearance, with a round face, short nose, and black hair.[24] Certainly, there was a Turco-Mongol strand among the Tatars, in particular among the allied Noghai whom Beauplan may have confused with Crimeans. In reality, the inhabitants of the Crimea included many of Mediterranean and even distant Germanic origin due to the Peninsula's long, settled history.

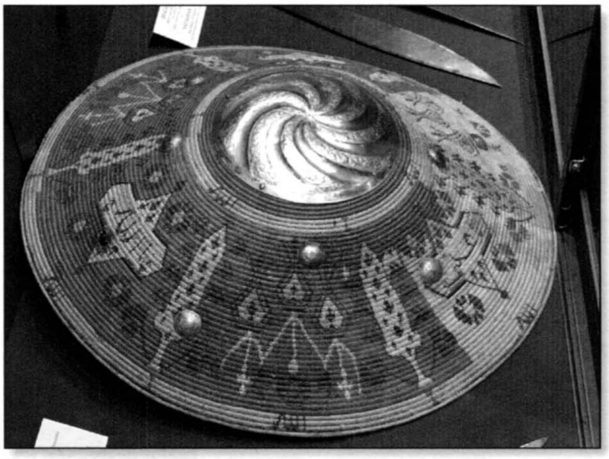
Common Tatars wore shirts and breeches of woven flax. Over this, a Tatar who had the means would wear a caftan or, if not, a jacket of sheepskin which could be reversed in winter, when the fleece was worn inwards. In times of heat or rain, the wool was instead worn outwards, the garment then functioning as a raincoat. Wealthy Tatars followed Ottoman styles in both apparel and armour. This meant a shirt and breeches of cotton, a caftan, and a fur-lined coat. The cap, often made of quilt, would be fur-lined, too. Tatars generally shaved their heads and only seldom wore beards, unless of high rank. Moustaches were very common.

Those who had the means used armour, commonly a chainmail cuirass and iron helmet. Those who had armour also generally carried round shields, of a similar type to those still used within the Commonwealth and in the previous century were common in Muscovy. Armaments included the composite bow, a long, curved sabre, and a curved dagger. Beauplan describes quiver for 18 to 20 arrows.[25] Some Tatars carried



Above: Noghai Tatar family, illustrating the sheepskin dress of the Tatar rank and file. (Adam Olearius, 1656)

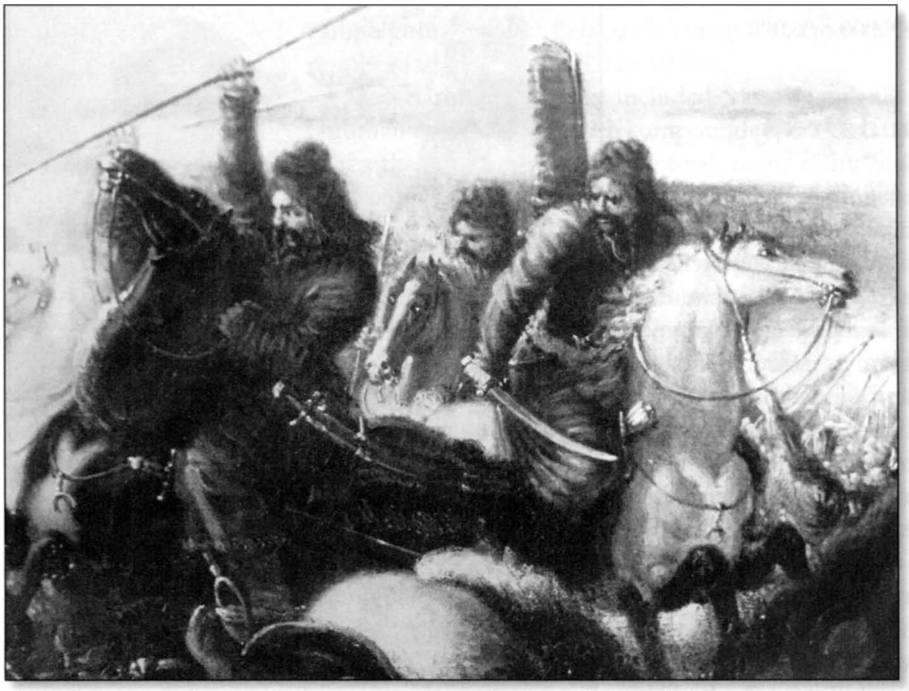
Below: Crimean Tatar round shield, with a probably later boss by a Ruthenian craftsman. (Museum-Arsenal, L'viv Historical Museum)

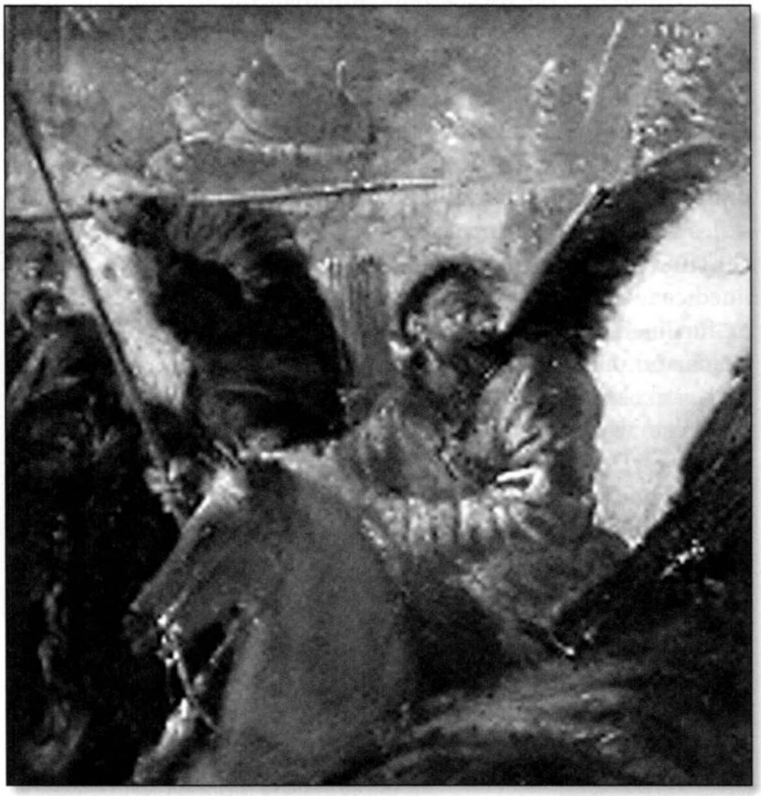


---

[24] Beauplan, *Description*, p.73.

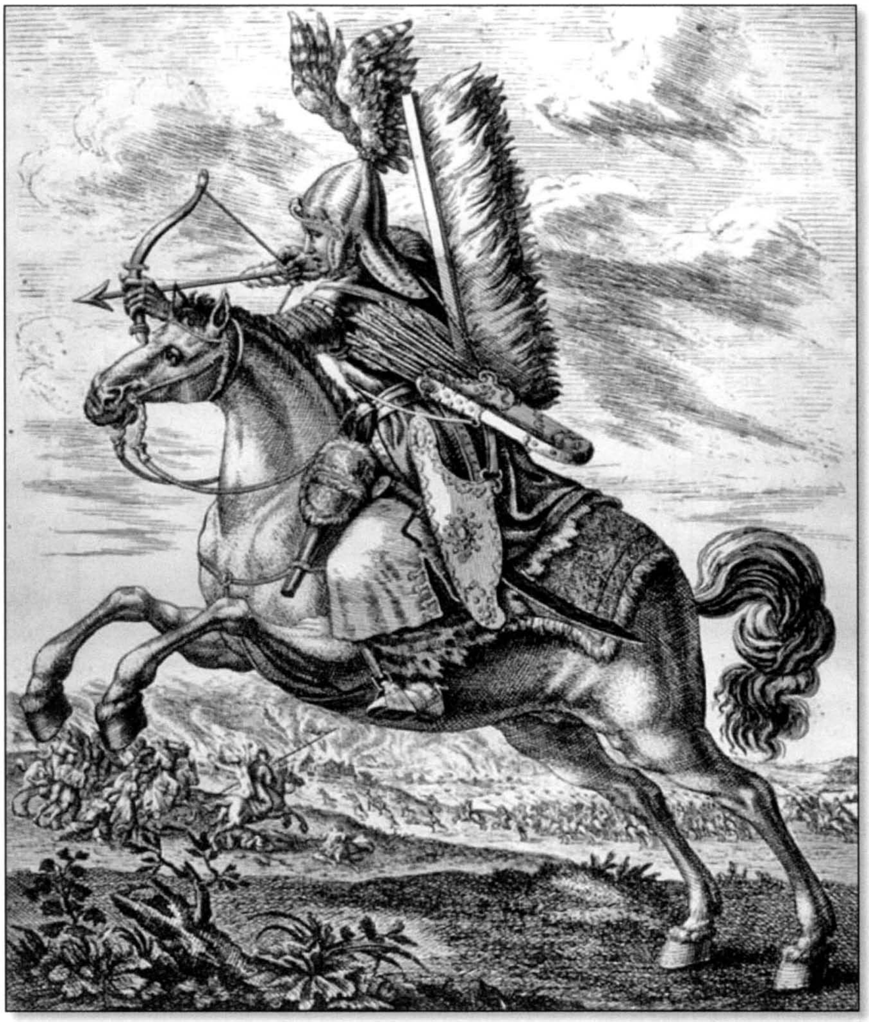
[25] *Ibid.*, 76.





Above: Tatar with a hussar-style wing on his back, in the hussar manner. (Detail of a painting of the battle of Warsaw, 1656, made by Johann Philip Lemke under the direction of the contemporary eyewitness Erik Dahlbergh; National Museum, Stockholm)

Right: Tatar with a hussar-style wing on his back, in the hussar manner. (Detail of painting of the battle of Warsaw, 1656, made under the direction of the contemporary eyewitness Erik Dahlbergh; Drottningholm Castle)



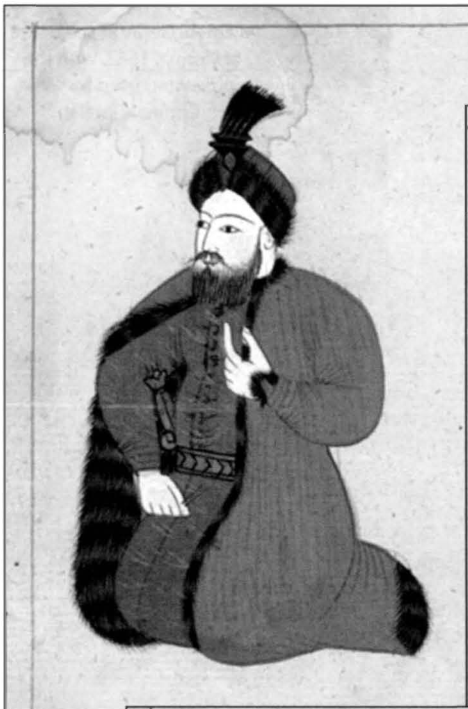
Mirza Ali Geray at the battle of Vienna, 1683, with the single wing used by some Crimean Tatars.

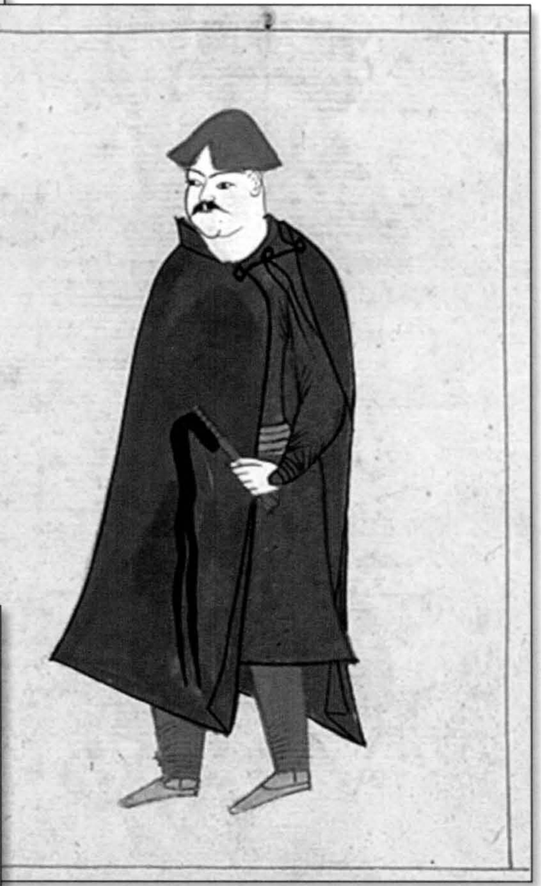
pistols, arquebuses, or muskets. Firearms and gunpowder were Ottoman in style, and most were manufactured within the Ottoman Empire. However, armourers operated workshops in the Crimean capital of Bakhchisaray, and some of them manufactured muskets, including a limited few of high quality. These were generally not used by Khanate soldiers but exported, in most cases to the Circassians of the North Caucasus, from which the Crimeans in turn imported high-quality arrows.

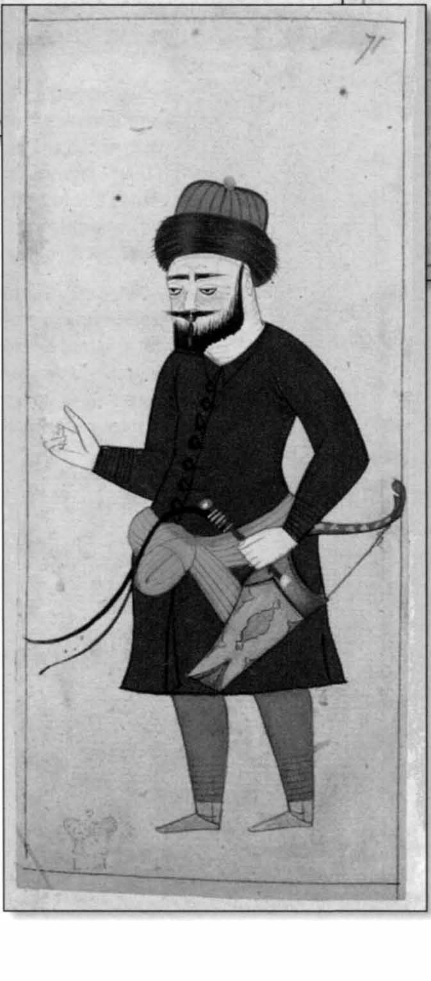
As noted, the Crimean Tatars no longer employed any dedicated armoured shock cavalry, beyond that of a few well-armed personal retinues. Although the occasional wealthy Tatar might use a lance, akin to the Muscovite bear spear (a heavy spear with a leaf-shaped head, known in Slavic lands as a *rogatina*), these were unusual before the 1660s. However, then the need arose to confront the Kalmyk cavalry which arrived in strength as Muscovite allies.[26] Since the Kalmyks frequently used lances (and even muskets), the

---

[26] Bobrov, Sheykhumerov, and Salnikov, 'Stabbing Long-Shafted Pole Weapons', pp.884–914.







Top left: Crimean Tatar noble, from a drawing in the Album of Costumes acquired in Constantinople in 1657–1658 by Swedish envoy Claes Brorson Rålamb. Dressed in a blue caftan, brocade sash, fur-lined vermillion overgarment, and the characteristic fur-trimmed cap.

Above: Crimean Tatar retainer, from a drawing in the Album of Costumes acquired in Constantinople in 1657–1658 by Swedish envoy Claes Brorson Rålamb. Note the short whip, used instead of spurs when mounted on horseback.

Left: Crimean Tatar, from the Album of Costumes from c. 1620 known as *The Habits of the Grand Signor's Court*.

Crimean and Noghai response was to attempt a return to the old tradition of Mongol shock cavalry. As a result, some Tatar units, in particular elite retinues, returned to the use of the lance.[27]

As for cannons and artillerymen, these were commonly provided by allies: Ottomans or cossacks. The few Tatars who served as artillerymen would have dressed similarly.

Tatars rode in the Mongol style, with a saddle and short stirrups, and guided his horse with a short whip, in the same manner as other easterners who based their military on the Mongol system and nomad customs. The saddle was placed over a felt horsecloth which also could be used as a blanket, or even as a simple tent. However, the Tatars also used real tents of the yurt type traditionally employed by Eurasian equestrian nomads.

Wealthy Tatars wore a hussar-style wing on their back, in the hussar manner.

Banners and Music

Crimean Tatars used a variety of standards. Following old Mongol tradition, the Khan would use a horse-tail standard (*tugh*), which was a pole with circularly arranged horse tails attached at the top. Each tribe would bring a tribal banner (*bayraq*) when going to war. There would be officers' flags (*sanjaq*), too, since they were needed to keep the formations in order while moving across the steppe. However, there seems to be no reliable contemporary information on what the various standards and flags looked like and which colours they had.

In addition to standards, kettle-drums were used to keep the formations in order. Again, this was part of the old Mongol tradition. The members of each *qosh* reportedly would also bring a drum and communal cooking pots (*qazgan*) when called up.

Raiding and Logistics

Equestrian nomad rulers such as Mehmed Geray of the Crimean Khanate had to consider certain realities that his opposite number in a sedentary, agrarian state did not need to ponder. Chief among them was the issue of extracting revenue.

Unlike an agrarian state such as the Commonwealth or Muscovy, an equestrian nomad state did not depend on its ability to extract resources from its own population in the form of taxation. Few nomads paid taxes because first, they lacked the monetary resources, and second, they easily could move out of range of tax collectors. Instead, the nomad state depended on the subsidies that it extorted from neighbouring settled states. Fundamentally, this was the policy that the Mongol Empire and its successor, the Golden Horde, had employed against the various Russian principalities that existed before Muscovy. It was also the basis for the regular grand raids carried out by the Crimean Khanate against its neighbours, primarily Muscovy and the Commonwealth. This strategy took advantage of the nomad ability to live far beyond the borders of the neighbouring sedentary state and thereby beyond its military range.[28] The armies of the sedentary state were simply unable to reach the nomads in their core territory. Muscovy's armies suffered from this particular difficulty as late as in 1687 and 1689, even though the Tsar by then had largely transformed his military might into armed forces of the Continental model.[29] The strategy also took maximum advantage of nomad mobility, that is, the ability of the nomads to make sudden raids and strikes deep into the settled state and then disappear before any enemy soldiers could react. The strategy consisted of three elements: violent raiding (what could be called a form of early state terrorism) to terrify the government of the sedentary state, a repeated alternation of war and peace to maximise the amount of subsidies and trade privileges granted by the ruler of the agrarian state, and a deliberate refusal to occupy the territory of the settled state even after major victories.

---

[27] Which in turn inspired the later adoption of *uhlan* lancers in Commonwealth and other European armies, as noted based on the Tatar *oghlan*.

The strategy relied on two assumptions: first, that the government of the agrarian state feared that disruptions along the border with the nomads might lead to the unravelling of its power and the overthrow of its government or ruling dynasty, second, that its central government would rebuild and resettle the devastated frontier areas so that they could be plundered again. Another important factor was that warfare was far more expensive and disruptive for the agriculturalists than for the nomads.

Every raid was followed by nomad envoys who suggested that the raids could be stopped if the government of the agrarian state agreed to a new, and to the nomads more favourable, peace treaty. The nomads needed subsidies as well as trade in the form of border markets (where pastoral surpluses could be exchanged for manufactured goods such as cloth and metal or agricultural food products such as grain). If the agrarian state agreed and subsidies and border markets were provided, relations between the two empires usually did stabilise, at least until the nomad ruler needed increased subsidies, or until a new regime among the agriculturalists thought it could get away with not paying the nomads – a not unheard of phenomenon. With regard to the Crimean Khanate, there was an optional boon to be gained. Muscovy and the Commonwealth were rivals, so each had an interest in the Tatars raiding the other. The Crimean Khan could accordingly play the two off against each other, increasing his demands until he reached the level when either Muscovy or the Commonwealth chose to, or could not, pay any more. In effect, the Crimean Khan auctioned off his ability to raid, by eventually going to war against the one who paid the least for protection in money, furs, and goods.[30]

---

[28] Thomas J. Barfield, *The Perilous Frontier: Nomadic Empires and China, 221 BC to 1757 AD* (Oxford: Blackwell, 1992), pp.49–51, 63; Fredholm von Essen, *Nomad Empires and Nomad Grand Strategy*, pp.12–15.

[29] Fredholm von Essen, *Muscovy's Soldiers*, pp.112–15.

[30] Cotossichin, *Beskrifning*, p.64.

Because goods were vital, too. The goods available to the nomad Khan consisted of plunder from raids as well as subsidies and trading rights received from agrarian states. The settled states in effect paid for protection, and these payments were the chief income of the Khan. and thereby his chief means to maintain control over his subjects. The nomad ruler distributed the plunder and the trading rights and subsidies to local tribal leaders, who while they had lost their full autonomy, thereby received more material benefits than they could have amassed on their own. A nomad khanate lasted as long as its central power, that is, the Geray dynasty among the Crimeans, was strong enough to retain central control. However, if this system collapsed, for instance in a succession crisis, the local tribal leaders again became fully autonomous and the steppe reverted to the pre-unification situation, which is what eventually befell the Mongol Empire and the Golden Horde – and was a process under way in the Crimean Khanate, where the vassal clans no longer recognised the absolute rule of the Khan but had to be persuaded to join in his endeavours.

Because of these realities of state and revenue extraction, the Crimean Khan had no option but to send his army raiding from time to time. While he acquired some revenues from taxes paid by his settled subjects in the Crimean Peninsula, and received yet more from maritime trade, neither was sufficient to pay off the tribal aristocracy. Without their support, even if it was limited, there was neither an economic nor political foundation for a Crimean Khanate. Furthermore, the Khanate's maritime trade was focused on one particular economic activity: the capture and export of slaves. This was yet another reason why raiding played a significant role in the Khanate's economy. Tatars raided for people, livestock, and goods the sale of which produced substantial revenue. The captives were sold in the slave markets in the Tatar cities in the Crimean Peninsula and in most cases were destined for the Ottoman Empire. Booty in general and captives in particular was referred to as *esir* ('captive'; 'slave') in Tatar sources.[31]

The prevalence of raiding meant that the Khanate followed several standard procedures when it went to war. Although local raiding parties might set out at any time of the year, the primary raiding season began in January or early February and lasted until August, or if conditions were suitable, October. It was easier to cross the steppe in winter, when rivers were frozen.

The Khan would call up his army and his vassals in advance. In one well-known mobilisation order from 1545, all men aged 15 to 70 were ordered to present themselves. This corresponded to previous nomad practices and can be said to be a remnant of earlier Mongol instructions. However, in most situations there was some bargaining between the Khan and the tribal princes over how many men would be needed.

Since the major part of the Tatar army, or the entire army, consisted of nomads, it could be raised rapidly, commonly in two to four weeks. When called up, each warrior was ordered to bring provisions for three months and at least three horses.

---

[31] The Slavic languages borrowed the term as *yasyr'* in Russian and *jasyr* in Polish. The Tatar term derived from Arabic *asir* ('captive') but in its general meaning of booty may have been influenced by the old Mongol term for the Siberian fur tribute, *yasaq*.

The Crimean army would assemble at Perekop, the fortress which guarded the isthmus which formed the gateway to the Crimean Peninsula and which was protected by an approximately six-metre wide and two-metre deep dyke and a two-metre high rampart.[32] The fortress was not only intended as an assembly point during mobilisation; earlier it had protected the Crimea from Noghai raids. Mehmed Khan took an active part in supervising the construction of this and other fortifications, even though a major part of the work was handled by Ottoman experts. Only the Crimeans assembled at Perekop. Allied contingents, such as the Noghai, would join later, when the army had already crossed the isthmus and moved into the steppe.

In similarity to other nomad armies, numerous scouting parties would operate ahead of the main force. On the march, the Tatar army travelled in a number of files, each of which was led by a designated officer accompanied by a distinct banner. Each file would have a front of several men, depending on the terrain. Each man brought several spare horses, which moved at his side. In summer, the files were separated, moving in parallel. In winter, they tended to close up to protect themselves from the cold winds, at times forming a front of some 300 horses. Beauplan, who either observed a Tatar army on the march or talked to those who had, described it as having a front of 100 horsemen, each with two spare horses, which made a front of 300 horses. Because of this, 'their front may be 800 to 1,000 paces long, and the depth [of each file] can number 800 to 1,000 horsemen'.[33]

The army rode slowly so as not to exhaust the horses. Every hour, a whistle blast ordered a short halt. Tatar horses were used to conditions on the steppe and were able to sustain themselves without additional fodder. Typically unshod, they might have problems in mountainous terrain and on hard ice. During such conditions, the Tatars sometimes brought leather stockings for their horses.[34]

To reach their traditional raiding areas, the Tatar army would have to cross several rivers. Easiest was to cross in winter, if the river was covered with ice. When fords were unavailable, the Tatar army employed rafts. Crossings were dangerous, and sometimes men drowned. Although it is known that the Khan at times crossed by boat, most Tatars presumably had to be content loading their equipment and supplies on makeshift rafts, with their horses swimming alongside, possibly with their owners holding onto their manes.[35]

It was imperative for the nomads to achieve surprise. For this reason, Tatars were said to frequently aim to time their final approach to hostile territory during moonless nights to avoid detection, so that the raid could

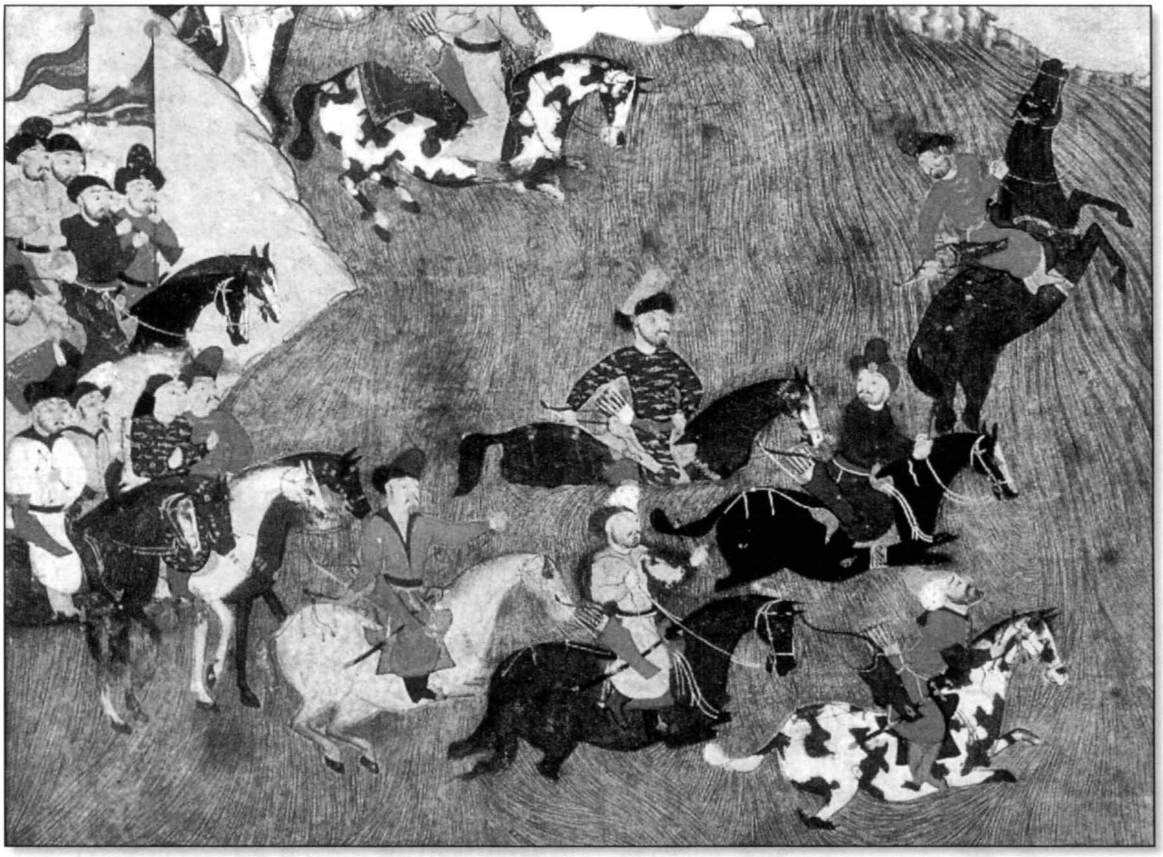
---

[32] Beauplan, *Description*, p.66. Perekop, 'ditch', was the Slavic name of the settlement which the Tatars referred to as the Or Qapi, 'Ditch of the Door'. The Door signified the position as the gateway to the Crimea and the Tatar heartland.

[33] Beauplan, *Description*, pp.85–6. Beauplan no doubt meant horses, not horsemen, or else exaggerated the total.

[34] *Ibid.*, p.84; Anon. [Chevalier], *Discourse*, p.50.

[35] Beauplan, *Description*, pp.100–2.



Crimean Tatars crossing a river, as depicted in an Ottoman miniature, 1579. They wear caftans in a variety of colours, including vermillion red, light blue, dark blue, green, and white. Some caftans, including yellow and pink one, are obviously made of brocade. The miniature depicts two standards, one red with a single tail and another green with swallow-tails. Both standards are decorated with what probably is Arabic letters in gold. (*Tarih-i Sultan Süleyman*, also known as the *Zafarnâma*)

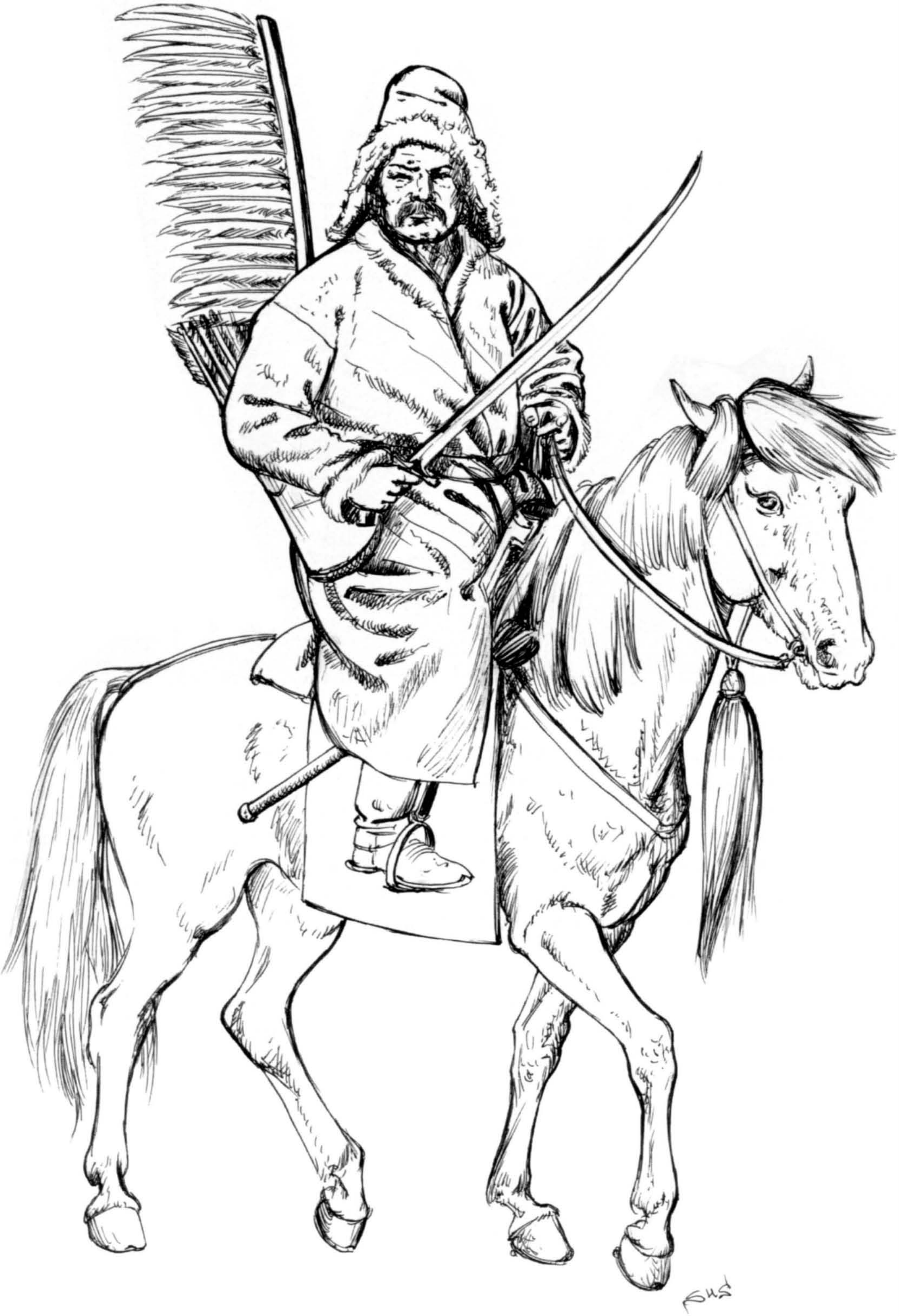
be carried out at night under the full moon. This timing was well known among their adversaries, perhaps so well-known that it was more a folk tale than something the Tatars really strived for. On the other hand, the Crimean Tatars were very familiar with the terrain. Over the decades, they had worked out which were the best access routes into both the Commonwealth and Muscovy, and when setting out across the steppe, they would select one of them. Such a route was known in Tatar as a *torhak* ('trail'), and it is telling that the same word was adopted into seventeenth-century Polish for discussions on the traditional Tatar routes. Both the Commonwealth and Muscovy knew the access routes, but they did not have the resources to fortify all of them. The Tatar army accordingly had a reasonable chance to reach its objective without being detected, even though it followed one of the traditional trails.

Having reached their destination, but before the raid began, scouting parties were dispatched to capture prisoners for interrogation. The prisoners were routinely killed after questioning, since they could not be brought along and might warn the enemy, if released.

When the Tatar army reached the chosen raiding area, about two-thirds of the army would make camp. The remaining third would set out for the raid. It would first divide into two main groups.[36] Then, at a certain distance from

---

[36] *Ibid.*, 87; Anon. [Chevalier], *Discourse*, p.51.



the camp, the two groups would subdivide into raiding parties (*chapghul*, from *chap-*, to gallop; to raid'), each with an approximate strength of some 100 men or so in most cases.[37] The raiding parties would spread out over a large area, which they would pillage. They would take cattle, burn crops and buildings, kill those whom they did not want to take as slaves, and bring the rest and the booty back to the camp. Then another third would set out, in the same manner. Thus, the bulk of the army always remained to guard the camp and plunder. This was of the utmost importance. As noted, some Tatars had to borrow the funds necessary for horses and provisions to go on the campaign, for which reason they depended on the acquisition of plunder to repay their debts upon returning.

Raiding would go on for several days.[38] When sufficient plunder had been taken, the army returned home, usually by a different route from the one which they had used upon their approach.[39] Often the army began its return already when the last raiding parties were out plundering, since the return journey was slow and dangerous, with the Tatar army slowed down by herds and captives. If at all possible, the raiding force would leave before the enemy had time to raise men and march against them.

The Tatars would not lay siege to any town or fortress. If one was located close to their camp, they would surround it, so as to prevent peasants from taking refuge there. Furthermore, the Tatars would generally avoid set battles, unless they had to protect their camp or, on the way home, their plunder. However, a skilful Commonwealth or Muscovite commander would be able to guess where the Tatar army would travel, since they tended to follow their traditional trails and major rivers only could be crossed safely at certain fords. He would then aim to proceed straight there, and lay an ambush for the Tatar army, encumbered with plunder as it was, instead of embarking upon a possibly aimless pursuit across open country.

Earlier in their common history, the Tatar raids had been excessively devastating to the Commonwealth and Muscovy alike, with each grand raid returning to the Crimea with tens of thousands of fresh slaves and as many captured heads of cattle. Moreover, the incessant minor raids during a year, taken together, might easily have brought just as many as the grand raid. By the time of the Deluge, however, both the Commonwealth and Muscovy had significantly improved their border defences. Raiding conditions were no longer as good as in the past. As a result, Tatar raiding parties now operated at shorter distances from their camps, and the raids were no longer quite as ambitious in scope as in the good old days.

Facing page: Tatar officer with hussar-style wing,bow, sabre, and under his saddle, a spherical mace as the symbol of command, based on a painting by Johann Philip Lemke under the direction of the contemporary eyewitness Erik Dahlbergh. The officer may wear armour under his fur-lined overgarment. In warm weather, the lower edge of the fur-lined cap was folded up, as illustrated in Plate 16. (Illustration by Sergey Shamenkov)

---

[37] Polish works tend to spell the term *chapghul* as *chambul*, which is a less correct approximation of its pronunciation. Incidentally, *chapghul* was not a designated unit type or size and means no more than a raiding party. Even an infantry or artillery unit could be referred to as *chapghul*. Another Turco-Mongol term for 'raiding party' was *yortaghul*, which we have already seen borrowed into Russian.

[38] Anon. [Chevalier], *Discourse*, p.51.

[39] Beauplan, *Description*, p.89.

Colour Plate Commentaries

Plate A

1. Swedish Cavalry Trooper, Viborg Cavalry Regiment

A Swedish cavalryman was expected to wear a helmet and cuirass, consisting of a shot-proof breastplate and backplate. However, most cavalrymen seem to have dispensed with the helmet, even though they continued to rely on the shot-proof cuirass. Many cavalrymen would also wear a buff coat, either below the cuirass (as shown here) or instead of a cuirass. Perhaps for this reason, cavalry units seem not yet to have dressed in garments of uniform colour. The colour of the clothing was simply not much visible under the cuirass and buff coat. This trooper is armed with a rapier with a hand guard for added protection, which was the most common type of rapier at the time of the wars of the Deluge. He would also carry two pistols, in saddle holsters.

2. Swedish Dragoon, Adam von Weiher's Dragoon Squadron

At the outbreak of war, most Swedish dragoon units, including Weiher's Dragoon Squadron, were enlisted on the Continent. Dragoons were mounted musketeers who moved on horseback but fought on foot. They were armed with muskets, in this case a standard matchlock, with a rapier as sidearm. This dragoon carries a rapier of the old type with quillons, still serviceable but by this time regarded as near obsolete. No doubt, remaining stock was used to arm newly raised dragoon units. Pistols were not distributed to Swedish dragoons at this time. Swedish dragoons wore supposed to be issued helmets but no breastplates. This man either never received a helmet or simply prefers his wide-brimmed felt hat. Newly raised dragoons wore shoes, not riding boots, and did not use spurs.

Plate B

1. Swedish Musketeer, Hälsinge Regiment

Like most other Swedish national infantry and dragoon units, the soldiers of the Hälsinge Regiment were issued uniforms, in their case a blue coat and breeches. This soldier is armed with the standard 10 bore matchlock musket. He belongs to one of the many units which at this time were in the process of replacing the old-style bandolier, which had wooden bottles for gunpowder, with paper cartridges, each containing a measured charge of gunpowder. A soldier would carry his paper cartridges in a cartridge box of leather. As a sidearm, this musketeer relies on a modern-style rapier with hand guard. He has discarded the regulation issue musket fork rest, either for good or because he is engaged in a siege operation, when fork rests were less useful.

2. Transylvanian Haiduk Cavalry Officer

Transylvanian haiduk cavalrymen primarily served as irregular light cavalry. Unarmoured or mostly unarmoured, the majority were armed with lance, sabre, and the occasional firearm. This well-to-do cavalry officer carries a sabre but also an expensive hunting gun, possibly a wheellock but more likely a snaplock or snaphance since he does not carry any wheellock spanner. The flat sabretache container was intended for carrying ammunition but many officers carried other items as well, including letters, documents, and money.

Transylvanian dress was primarily Hungarian in style. Like many other garment styles in the region, Hungarian dress customs to a significant extent derived from Inner Asian and Ottoman patterns. Transylvanian dress was based on the *dolman*, a caftan-like garment of Ottoman origin (Turkish: *dolama*) the front of which closed with large, often round or elongated buttons fastened in string hoops. The dolman fastened with a belt or sash around the waist, in this case a sash made of textile strips. The dolman had tight sleeves, closed with buttons or clasps at the hand, the back of which was covered by a characteristic elongated cuff (known as a 'dog's ear'). The cuff could be worn folded back (as on the man's right arm) or extended to give some additional protection to the hand in case of poor weather (as on his left arm). Well-to-do Transylvanians such as this officer would wear a *mente* over the dolman. This was a garment of similar shape as the dolman, but worn over it as a coat. A noble's mente was often trimmed with fur. The expensive hunting gun and the fur-trimmed mente strongly suggest that this haiduk officer is a noble.

On his head, this officer has a feather-decorated fur cap. Like most Transylvanian cavalrymen, he wears tight trousers and long soft boots in the Ottoman style with iron heels. Again like many Transylvanians, he has shaved his head and chin but wears a long moustache in the Tatar and Ottoman manner.

Plate C

1. Polish Hussar, Jan Zamoyski's Banner

A Polish hussar was ostensibly well protected by half-armour and helmet, commonly of the *szyszak* type which is illustrated here. However, the armour was not shot-proof and thus vulnerable to Swedish musket fire. The hussar's main weapon was a long, lightweight lance for melee combat supplemented by either a palash or an armour-piercing sword hung on the horse under the left side of the saddle. As an additional sidearm, the hussar customarily carried a curved sabre. Many hussars, including this man, also brought a couple of wheellock pistols in saddle holsters. This is obvious from the wheellock spanner suspended from his belt. Quite a few added the traditional composite bow and arrows as well. This man carries a war hammer, which was the sign of a noble or somebody in command. Judging from his serviceable but non-spectacular armour, this hussar perhaps serves as a junior officer.

Like other hussars, this man wears civilian dress under his armour, of a style which to a significant degree derived from Inner Asian patterns. Wealthy hussars wore a fur of a wild animal, preferably a leopard or wolf, over his armour. In battle, this hussar would have added a wing made of a line of feathers inserted into a wooden frame which was affixed either to his armour backplate or saddle. While the proud winged hussars were regarded as the primary Polish arm, they were rapidly becoming obsolete in comparison to modern types of soldiers, whether fielded by Swedes, Prussians, or Muscovites.

2. Lithuanian Pancerni Cavalryman, Grand Hetman Paweł Jan Sapieha's Banner

A Lithuanian *pancerni* cavalryman wore half-armour based on somewhat old-fashioned but still serviceable chainmail armour, worn with vambraces and typically a *misiurka* helmet. The most common subtype of this helmet in the Commonwealth was a low variant characterised by the small, round metal plate which only covered the crown of the skull (a style known in Persian as *kulah-zirah*). This type of helmet came with a long chainmail coif or neck guard, which the soldier fastened under the chin when preparing for battle (which this man has neglected to do). As usual, the helmet includes a significant layer of padding underneath the round metal plate, which incidentally also makes it look taller. This cavalryman has made his helmet yet more impressive by adding feathers and plumes.

Like other *pancerni* cavalrymen, this soldier is armed with a composite bow, carried in a bow case on the left side and a quiver on the right. This man also brings one or two wheellock pistols in saddle holsters, which is evident from his wheellock spanner. He carries a curved sabre as a sidearm. The Lithuanian *pancerni*, unlike those elsewhere in the Commonwealth, were also commonly armed with a long bear spear (a heavy spear with a leaf-shaped head, known as *rogatina* or, in Ruthenian, *rohatyna*) or a short lance (*dzida*), or both.

Some Lithuanians wore a full beard in the manner of northern Ruthenians and Muscovites. This cavalryman wears a beard, but one seemingly inspired more by Swedish or Prussian styles.

Plate D

1. Wallachian Cavalry Officer, Jacek Szemberk's Wallachian Banner

Wallachians and Transylvanians fundamentally dressed alike, in Hungarian style, although Wallachians often wore large fur hats. Wallachian cavalry were primarily armed with composite bow and sometimes spear, and only those of some means and a traditional outlook wore chainmail armour. Wallachians used the curved sabre as sidearm. This officer would, no doubt, also carry a pair of wheellock pistols in saddle holsters. It is the quality fur-lined coat and, even more so, the war hammer, long enough to be utilised as a walking stick, which identifies him as an officer in Commonwealth service.

While the Wallachian banners were initially enlisted in Wallachia, over time the numbers were invariably filled out by men from the Commonwealth. Based on contemporary illustrations, most Wallachians wore full beards. This officer is either of Commonwealth origin or has adopted a more up-to-date hairstyle because of his years in Commonwealth service in Royal Prussia.

2. Polish Dragoon, Aleksander Koniecpolski's Dragoon Banner

Commonwealth dragoons were armed with muskets. Some also carried sabres as sidearms, and it is possible that some were armed with spears. Many were also issued axes, since they frequently were employed in tasks related to construction labour. This dragoon, of a unit raised from Polish peasants, carries a musket as his primary weapon. In similarity to the Swedish musketeer illustrated above, he carries his ammunition in a leather container attached to a baldric slung over the shoulder, with additional items in a belt pouch. However, he seems to put greater trust in his curved sabre. Like dragoons elsewhere, he has not been issued any armour.

Plate E

1. Muscovite Voivode

In the Muscovite army, a voivode was the title used for the commander or deputy commander of a division. Selected from high-ranking princes and boyars, voivodes could afford elaborate armour of traditional Turco-Mongol type, with chainmail and metal plates, joined by straps, to protect the chest, back, and arms. A suit of armour of this type was known as *zertsalo* ('mirror'). Such armour, which in part might be covered in silk brocade or velvet, was together with a helmet of the *shishak* type regularly used in battle by voivodes and old-style cavalry until the end of the seventeenth century. At other times, voivodes wore the traditional garments of the wealthy aristocracy, which like most clothes worn by Muscovites at the time were of Inner Asian origin, including the caftan, the fur cap, and high, soft boots. By this time, boots were often hobnailed and comparatively high-heeled. Unsurprisingly, a nobleman's clothes were lavish and of high quality, often including silks and expensive furs. Wealthy hereditary servicemen in the old-style cavalry looked much the same, as long as they had the means.

In battle, both voivodes and hereditary servicemen would mostly serve on horseback, carry a composite bow, and often also a pair of pistols in saddle holsters. In addition to his sabre, a voivode would typically carry a mace as a symbol of command.

2. Muscovite Strelets

The streltsy ('shooters') formed the solid infantry backbone of the Muscovite army until their gradual replacement by the new formation infantry. The Moscow-ranked streltsy were the most important, even though streltsy were raised in provincial towns as well. The streltsy were uniformed, but there is little information on uniform colours during the wars of the Deluge. For this reason, this particular uniform is based on data from the 1670s. There is every reason to believe that uniform colours then had not changed from those used during the wars of the Deluge.

By the 1650s, many streltsy had already rearmed with flintlock muskets. However, some of them still retained their old matchlock muskets, including this soldier. He carries a bullet pouch, a powder-flask, and a set of wooden bottles for gunpowder, suspended from a leather bandolier, on which he also has attached a spare match. In addition to his musket, this soldier carries a rapier as a sidearm. Earlier, most streltsy carried sabres, but by this time, both rapiers and sabres were in common use.

Plate F

1. Muscovite Infantry Sergeant, Aggey Shepelyov's Selected New Formation Infantry Regiment

In the new formation regiments, organisation, arms, equipment, and tactics aimed to follow Continental, or to be specific, Swedish standards. This, however, did not apply to uniforms. Most Muscovite infantry, unlike the foreign officers who often commanded the new formation regiments, were dressed similarly to the streltsy, in caftans, fur caps, and high, soft boots. The colour of the uniform of this infantry sergeant shows that he belongs to the first 'thousand' of the first 'selected' regiment, commanded by Colonel Aggey Shepelyov. Within each given company, the sergeants wore caftans of a different colour from those of the rank and file. We know that in 1661 the rank and file within the first 'thousand' of this regiment wore green caftans while sergeants wore blue caftans, while in the second 'thousand' of the same regiment, the rank-and-file wore blue and sergeants green.

Muscovite new formation infantry consisted of pikemen and musketeers. Arms and, for the pikemen, armour did not deviate from Continental standards. Large supplies were imported, including from Sweden, while others were manufactured in Muscovy according to the same specifications. Pikemen were issued long pikes, helmets, and cuirasses, while musketeers carried matchlock muskets and sometimes swinefeathers of the Swedish type. All soldiers were issued rapiers as sidearms, just like this sergeant. Unlike the new formation cavalry, new formation infantrymen were issued uniforms, arms, and equipment from state arsenals. In addition to his rapier, this sergeant carries a berdysh pole-axe which he could use as a musket rest as well as for hand-to-hand combat. In the latter situation, the berdysh was reportedly particularly good against enemy cavalry.

2. Muscovite New Formation Cavalry Sergeant, Fyodor Wormser's Cavalry Regiment

Similarly to the new formation infantry, most Muscovite new formation cavalry, unlike the foreign officers who often commanded the new formations, were dressed in Muscovite style, in caftans, fur caps, and high, soft boots. This cavalryman displays a combination of eastern and western styles. His hairstyle is western, as is his coat, while the boots are eastern in style, in fact more reminiscent of the Commonwealth than Muscovy. On the other hand, despite being a cavalry sergeant, he wears no spurs but still uses the traditional Mongol-style short whip (*nagayka*) to control his horse. This man may still ride in the Mongol style, with short stirrups. However, all his arms and armour follow the Continental style, as they should according to regulations: a snaplock carbine, rapier, cuirass, and helmet. He would also likely bring a pair of pistols in saddle holsters. The combination of eastern and western styles in garments and gear is explained by the fact that most Muscovite new formation cavalrymen were sons of hereditary servicemen, and just like their fathers in the old-style cavalry, each trooper was expected to equip himself, at his own expense. Each man was required to muster with a horse, a carbine, a pair of pistols, a rapier or sabre, a Continental-style cuirass, and a suitable helmet. It is thus unsurprising that most wore Muscovite dress – caftan and boots – under their Continental-style cuirass. The focus was on new organisation and armaments, not retraining, so the difference between a new formation and an old-style cavalryman might not always have been that great. Moreover, not all foreign officers were, in fact, foreigners. Over the years, many remained in Muscovite service, adopted the Orthodox faith, married Muscovite ladies, and had sons who like their fathers served in new formation units. Although little seems to be known about Colonel Fyodor Wormser, his name suggests that he was one of them.

Plate G

1. Brandenburg Musketeer, Johann Georg von Sieberg's Regiment of Foot

The arms, equipment, and dress of the Brandenburg army were essentially identical to those in the Swedish army. A musketeer carried a matchlock musket and a fork rest or swinefeather of the Swedish type. A pikeman was expected to wear a helmet and breastplate and backplate. Both were issued rapiers as sidearms. This musketeer employs a fork rest and wears the old-style bandolier with wooden bottles for gunpowder. There is little surviving information on Brandenburg uniforms. However, we do know from the French envoy to Brandenburg, Jean (Johann) Frischmann, that the infantry was 'all dressed in blue cloth'. Not all units may have worn blue uniforms, but his remark suggests that several regiments certainly did so.

2. Ukrainian Cossack Officer or Cavalryman, Chernigov Regiment

Although the Ukrainian Cossacks in time became particularly famous as light cavalry, at this time they lacked the horses to muster large cavalry units. Those that existed were primarily used for reconnaissance. Instead, most cossacks fought as infantry, armed with arquebuses and muskets. This well-to-do registered cossack either serves as a cavalryman or as an infantry officer. The registered cossacks constituted the core of the army of Cossack Ukraine since they had a background as professional soldiers in the Commonwealth army.

Most cossacks followed the same general dress styles as other Ruthenians as well as Muscovites, based on a fur hat, caftan, long undergarment, and high, soft boots. Along the southern border, those cossacks who had the means tended to wear flamboyant dress, including baggy trousers in the Ottoman style. Registered cossacks in the northern parts of the Ukraine instead generally dressed in styles more similar to those elsewhere in the Commonwealth. An example of this is the flat sabretache container which this cossack carries on his side, in Commonwealth fashion. The leather sabretache was intended for carrying ammunition, but contemporary observers noted that they were equally often employed for carrying letters, documents, a comb, and money.

Cossack armaments consisted of those also common elsewhere in the Commonwealth as well as in Muscovy, primarily the composite bow, sabre, berdysh pole-axe, musket, and the occasional pistol or carbine. A few cossack cavalrymen might carry lances, but this was unusual. A leader would carry a mace as a symbol of rank, following Muscovite and Commonwealth practices which ultimately derived from the Mongols. This cossack is armed with a carbine, still in its protective cover, with a sabre and an axe as sidearms. He also carries what looks like a long war hammer thrust through his belt, which would signify his status as an officer. A wheellock spanner for his carbine or pistols is suspended from the belt.

Many cossacks shaved their foreheads and necks but for a long lock on the top, combed onto the forehead (known as the 'herring' or 'crest' style, Ukrainian: *oseledets* or *chub*), and wore long moustaches in a style which derived from the Tatars, also was the prevalent style in the Commonwealth, and was common in the Ottoman Empire. The lock on this man's forehead is obvious, but the rest of his hairstyle is hidden by the fur cap.

Plate H

1. Ukrainian Cossack Infantryman, Priluki Regiment

Many cossack infantrymen were no more than levied peasants, poorly trained and armed only with light or even improvised weapons such as axes or cudgels or those manufactured from scythes and other farming tools. They were unarmoured, most lacked firearms, and some relied on bow and arrow. However, this infantryman is a registered cossack soldier which means that he belongs to the professional core of the army of Cossack Ukraine. He carries a musket or arquebus, with its protective cover slung over the shoulder, and a sabre and axe as sidearms. In addition, he carries a spade or similar tool thrust through his belt.

This cossack wears the customary high, soft boots of well-to-do Ruthenians and Muscovites. Many other infantrymen wore only simple peasant shoes. Except for his military experience, which possibly included some training, it is only the boots and his full set of armament which set him apart from the recently levied peasants who provided the major share of the men of his regiment. The lock on this man's forehead shows that like most other cossacks, he has adopted the 'herring' or 'crest' hairstyle.

2. Crimean Tatar Cavalryman

Although there was a Turco-Mongol strand among the Crimean Tatars, the inhabitants of the Crimea due to the Peninsula's long settled history included many of Mediterranean and even distant Germanic origin. The full beard of this cavalryman suggests that his ancestors might be found among the latter, perhaps the Crimean Goths, who in the late Middle Ages gradually adopted Tatar customs. Or, perhaps this is a tribal chief dressed for hunting, not war. Few Tatars were full beards, unless they were of high rank. The rest of this man's hairstyle is hidden by the fur cap. We do know that Tatars generally shaved their heads, but they commonly wore moustaches.

Otherwise, this Tatar cavalryman is dressed in the customary Tatar fashion, with a caftan, a fur-lined coat, high, soft riding boots, and a fur cap. His armaments include a composite bow, a curved sabre, and no doubt a curved dagger as well (in this illustration carried out of sight). Unusually, this Tatar cavalryman also carries a spear, akin to the Muscovite bear spear (a heavy spear with a leaf-shaped head, known in Slavic lands as a *rogatina*). These were reintroduced into the Crimean Tatar army in response to the onslaught of the Kalmyk cavalry which arrived as Muscovite allies during the wars of the Deluge.

Some Tatars also carried pistols, arquebuses, or muskets. Firearms and gunpowder were Ottoman in style. Tatars rode in the Mongol manner, with a saddle and short stirrups, and guided their horses with a short whip, in the same manner as other easterners who based their military on the Mongol system.

Further Reading

There are numerous popular and academic books, in various languages, which describe one or more campaigns of the wars of the Deluge. Yet, to identify them it is sometimes helpful to know that the war is frequently referenced under different names. Although the Swedish Deluge is the popular name in Poland, Polish scholars instead refer to this collection of wars as the Northern War. However, they tend to use the term Northern War for several conflicts with Sweden. The war which opened with the Swedish invasion in 1655 and ended with the treaties of Oliva and Copenhagen in 1660 is for this reason often referred to as the Second Northern War.[1] Some German historians have adopted this nomenclature.[2] However, many traditional German and Anglo-Saxon historians instead label the wars of the Deluge the First Northern War, while many Russian scholars use the First Northern War as a synonym for the Thirteen Years' War of 1654–1667. To complicate matters further, national historiography in several of the participating countries by tradition uses yet other names, based on local experiences. So is, for instance, the Swedish-Muscovite war in Ingria, Kexholm County, and Karelia in Finland by tradition known as the Rupture War (Finnish: *Ruptuurisota*), since it resulted in a rupture between the Lutheran and Orthodox populations in the border territories.[3] Yet, the same rupture took place along the entire religious fault line, from the Black Sea to the Arctic. Even so, the Rupture War is generally regarded as covering events in Finland only.

As for contemporary sources, the possibly most important is Samuel von Pufendorf's history of the deeds of King Charles. The official Swedish history of the wars, it was first published in Latin so as to get maximum international exposure. It is perhaps most easily accessible to the modern-day reader in its German translation, which was published in 1697 as *Sieben Bücher von denen Thaten Carl Gustavs Königs in Schweden*. Pufendorf worked with primary sources and eyewitness accounts. Naturally, large number of source documents are also available in the national archives of the countries which participated in the wars. For the researcher who knows Swedish or Polish, most relevant sources are summarised and analysed in the Swedish Military Academy's series of studies on the wars of King Charles (*Carl X Gustaf-studier*) carried out by leading military historians of Sweden, Finland, Denmark, Norway, and Poland under the leadership of Arne Stade. The eight volumes, published between 1965 and 1979, provide detailed descriptions of most aspects of the campaigns. They also provide extensive archival citations, which make the volumes of the series invaluable sources on what is already known about the wars of the Deluge as well as the location of relevant archival documents. While all volumes were published in a form understandable to Swedish readers, several were also translated into Polish and at least one into Finnish.

---

[1] With this terminology, the term First Northern War is reserved for the wars which essentially began with the demise of the Livonian Order in 1562 and the passing of most of Livonia under the rule of the Grand Duchy of Lithuania and the Kingdom of Poland, which triggered a conflict with Muscovy and Sweden which only ended with the Treaty of Stettin in 1570. In Sweden and Denmark, however, this is known as the Nordic Seven Years' War of 1563–1570. Moreover, in consequence with the chosen terminology, the Great Northern War of 1700–1721 is in Poland sometimes labelled the Third Northern War.

[2] However, with the exception that the First Northern War label is then commonly applied to the entire Livonian War of 1558–1583. Swedish historians instead refer to the later stages of this conflict as the Twenty-Five Years' War with Muscovy of 1570–1595.

[3] The term rupture derives from the contemporary population records, which were written in Swedish. The Finnish-speaking population did not then use the term. Lappalainen, 'Finland', p.45 n.36.

With regard to earlier Swedish histories of the wars, Johan Levin Carlbom's several works (1905–1910) are very detailed but suffer from a number of erroneous details, which because of the lack of notes sometimes are difficult to identify. Torsten Holm's *Översikt* (1927) offers an excellent overview of the campaigns of the Deluge which still can be read with great profit, even though this brief work is dated with regard to some details. Among the older regimental histories, *Kungl. Svea livgardes historia* 3:2 by Bertil C:son Barkman, Sven Lundkvist, and Lars Tersmeden (1966) remains a solid study. Intended to form part of the Swedish Military Academy project, it was published earlier and gives a for its time up-to-date interpretation of the battles in Poland in which the Life Guard took part, based on Swedish sources which can profitably be read in conjunction with the Polish studies later published within the project. Another important regimental history, an early version of which formed part of the Swedish Military Academy project, is Jonas Hedberg's *Kungl. Artilleriet: Carl X Gustafs tid* (1982), which presents later research on the artillery not included in the project's volumes.

Among modern works in Swedish, Peter Englund's *Ofredsår* (1993) and, in particular, *Den oövervinnerlige* (2000) should be mentioned, since both, and in particular the last, cover events during the wars of the Deluge in considerable detail and also have been translated into Polish. Sadly, both are written in the style of extended literary essays, lack a system of notation, and add little to the results of the Swedish Military Academy project.

For the Brandenburg and Imperial armies, the works by Curt Jany on the former (published 1901–1906 and 1928–1933) and those by Alphons von Wrede on the latter (published 1898–1905) are invaluable.

For the wargamer interested in the wars of the Deluge, there is a particular treat. The Warsaw-based company Wargamer (<www.wargamer.pl; www.fireandsword.wargamer.pl>) has published a dedicated rules set for the period, known as *By Fire and Sword*. Their line also includes useful supplements, including the beautifully illustrated and highly recommended *The Deluge: Northern War 1655–1660* (Warsaw; Wargamer, 2015) by Michał Paradowski, Rafał Szwelicki and Marcin Sowa.

When researching the history of the wars of the Deluge and its associated literature, one important conclusion cannot be avoided. All countries that participated in the war, or their modern successors, at one time or another went through periods when historiography was coloured by nationalist ideas. Nineteenth-century Prussian historians regarded, correctly, the reign of Frederick William as a formative period for their country, and as a result, some exaggerated the Brandenburg-Prussian achievements in the war. The same can be said of many Swedish historians up to the time of the Second World War but with regard to the Swedish achievements (on the other hand, post-war Swedish historians instead tend to despise, and at times slander, the personality of and decisions by King Charles, who in their eyes is a despicable symbol of militarism and irresponsible adventurism). Soviet historians once had to conform to the party line that Muscovy liberated the Ukrainians, who thence gave their heartfelt support to Moscow. Meanwhile, some Polish and Ukrainian historians felt a need to assign all blame for the war, and all atrocities committed by the various parties, to nefarious foreigners. Polish nationalist historiography traditionally blamed the Swedes (and to a lesser extent, royals of foreign stock such as King John Casimir and Queen Marie Louise), while its Ukrainian counterpart in the same manner singled out the Muscovites as the chief villains of the story. Similarly, after independence Finnish historiography often painted a picture of an exploited Finland deliberately abandoned by the callous government in Stockholm and thus left at the mercy of Muscovite invaders. To navigate in such treacherous and emotional waters the researcher needs, in the words of the naturalist and scientist Charles Darwin, a 'heart of stone'.[4] Fortunately, a more balanced attitude to historiography eventually emerged in all these countries. The aforementioned joint Swedish-Finnish-Danish-Norwegian-Polish military academy project constituted one outstanding and positive example, and another is the current Russian project on the country's military history published in the series *Russkiye Vityazi* ('Russian Knights'[5]). Do not be fooled by its patriotic name; the series contains excellent research based on archival documents. The same can be concluded about the Polish publisher Bellona's series of first-rate books on the period, which began as a series on military history issued by the Ministry of Defence already during the Cold War.

In comparison, much less research has been devoted to those states which participated in the wars but either lack modern successors or find themselves represented by less formidable entities. The Transylvanian part of the story has to some extent been covered by Hungarian and Romanian historians, but since Transylvania no longer exists and cannot be said to fit easily into either modern-day Hungary or Romania, much more could be done. The Holy Roman Empire's military contribution to the war was to some extent researched by Austrian military historians, but then again,

---

[4] Charles Darwin (1809–1882) in a letter to T.H. Huxley in 1857 concluded that '[a] scientific man ought to have no wishes, no affections—a mere heart of stone.'

[5] The customary English translation 'knights' should not be interpreted in a feudal sense. Perhaps 'warrior-heroes' is a better translation of the term.

Austria is no longer an empire. Lithuania's part in the story is to some extent covered by Polish research, but it seems that more could be done. The far greater geographical extent of Lithuania in the seventeenth century than in the present means that this part of the Grand Duchy's history does not fit easily into the historiography of either modern-day Poland or modern-day Lithuania. Major parts of the territory in question now belong to Belarus, which of course has a historiography of its own which only seldom is consulted by historians elsewhere. Moreover, one voice is conspicuously lacking. The Crimean Khanate ceased to exist already in the eighteenth century, and there is little current research on its military history. In part, this is because the Khanate's records were destroyed or dispersed, but even more so, because the Khanate has no successor state. When researching the history of the wars involving the Crimean Khanate, the historian must remember that the Khanate is the silent partner in the records. Since the attention of most military historians is drawn elsewhere, they usually take for granted that the Khanate played a subordinate role. We hear of, say, 'Cossack Ukraine's army and its Tatar allies' or 'the Commonwealth army and its Tatar allies'. However, more than once events suggest that if we take into account realities on the ground, it would be far more appropriate to write, for instance, 'the Crimean army and its cossack allies' and the 'Crimean and Commonwealth armies'.

Since most works on the wars of the Deluge are published in other languages than English, the following bibliography is limited to the works most frequently referenced in notes and most useful for continued research. Other works are only mentioned in the notes.

Bibliography

Contemporary Sources and Compilations

Abduzhemilev, Refat R. (ed.), *Dokumenty Krymskogo khanstva iz sobraniya Khuseyna Feyzkhanova* (Simferopol': Akademiyanauk Respubliki Tatarstan, 2017)

Anon., *The Swedish Discipline, Religious, Civile, and Military* 1–3 (London: Nathaniel Butter and Nicholas Bourne, 1632. Edited by William Watts. Reprinted in facsimile by Pallas Armata, Tonbridge, Kent, 1998)

Anon. [Pierre Chevalier], *Histoire de la guerre des cosaques contre la Pologne, avec un discours de leur origine, païs, mœurs, gouvernement & religion: Et un autre des Tartares Précopites* (Paris: Thomas Iolly, 1668)

Anon. [Pierre Chevalier], *A Discourse of the Original, Countrey, Manners, Government and Religion of the Cossacks, With Another of the Precopian Tartars, and the History of the Wars of the Cossacks against Poland* (London: Hobart Kemp, 1672. Translation of the above)

Anon. [Samuel Collins], *The Present State of Russia* (London: John Winter, 1671)

Beauplan, Guillaume Le Vasseur, Chevalier de, *Description de l'Ukranie depuis les confins de la Moscovie jusqu' auxlimites de la Transylvanie* (Paris: J. Techener, 1861. First published in 1651) This edition reproduces the revised and enlarged 1660 text)

Beauplan, Guillaume le Vasseur, Sieur de, *A Description of Ukraine* (Cambridge, Mass: Harvard Ukrainian Research Institute, 1993). Translation of the above by Andrew B. Pernal and Dennis F. Esar.

Bennigsen, Alexandre; Pertev Naili Boratav; Dilek Desaive; and Chantal Lemercier-Quelquejay, *Le Khanat de Crimée dans les archives du Musée du Palais de Topkapi* (Paris and The Hague: Mouton, 1978)

Dahlbergh, Erik, ed. Herman Lundström, *Erik Dahlberghsdagbok (1625–1699)* (Uppsala: Almqvist & Wiksell, 1912)

Ehrenstrahl, David Klöcker, *Certamen Equestre: Karl XI:s karusell inför samtid och eftervärld* (Stockholm: Byggförlaget, 2005. Facsimile edition of the original copperplates from 1672)

Erdmannsdörffer, Bernhard, et al. (eds), *Urkunden und Actenstücke zur Geschichte des Kurfürsten Friedrich Wilhelm von Brandenburg* (Berlin: Georg Reimer, 23 vols, 1864–1930)

Evliya Efendi [Evliya Çelebi], *Narrative of Travels in Europe, Asia, and Africa, in the Seventeenth Century* (London: Oriental Translation Fund of Great Britain and Ireland, 1834 and 1850. Translation by Joseph Hammer-Purgstall)

Gordon, Patrick, ed. Dmitry Fedosov, *Diary of General Patrick Gordon of Auchleuchries 1635–1699* (Aberdeen: AHRC Centre for Irish and Scottish Studies/Aberdeen University Press, 2009–2016)

Gordon, Patrick. *Tagebuch des Generalen Patrick Gordon, während seiner Kriegsdiensteunter den Schweden und Polenvom Jahre 1655 bis 1661, und seines Aufenthaltes in Rußlandvom Jahre 1661 bis 1699* (Moscow: Prince M.A. Obolenskiy and M.C. Posselt, 1849). The traditional, but inferior, published version of the diary, easily available online but more of an edited summary than a translation.

Gordon, Patrick, *Passages from the Diary of General Patrick Gordon of Auchleuchries A.D. 1635–1699* (Aberdeen: Spalding Club, 1859. An earlier edition of excerpts in English.)

Haller, Gábor, ed. Károly Szabó, 'Haller Gábor naplója 1630–1644', *Erdélyi Történelmi Adatok* 4 (1862): pp.1–111. Gábor Haller's diary 1630–1644, including his military writings.

Jany, Curt, *Urkundliche Beiträge und Forschungen zur Geschichte des Preussischen Heeres* (Berlin: Grosser Generalstab, Kriegsgeschichtliche Abteilung II / Ernst Siegfried Mittler und Sohn, 1901–1906). Jany's work has been described as the most comprehensive treatise of the subject not only of its time but of all times, since many of the original army records he worked with were destroyed in an air raid on Potsdam in 1945.

La Chapelle, Julius Richard de, *Een Militarisch Exercitiæ Book eller Regementz Spegel, aff ett infanterie, hwaruthinnan författas huru ett regemente böör wara besatt medh officerare, sampt hwars och ens plicht och grad ifrån en gemen alt in til en öfwerste så och någre förslagh och påminnelser om ett och annat som böör observeras; jämpte alle simple och dubble exercitier, offensive och defensive fächtande medh en förmeradh skantz battalie, för Sweriges blomstrande ungdom som lust hafwa till thet ridderlige och militariske wäsendet korteligen samman fattadt* (Stockholm: I. Meurer, 1669)

Montecuccoli, Raimondo, ed. Alois Veltzé, *Ausgewählte Schriften des Raimund Fürsten Montecuccoli* (Vienna: Kriegs-Archiv/W. Braumüller, 4 vols, 1899–1901)

Noyers, Pierre des, *Lettres de Pierre des Noyers* (Berlin: B. Behr, 1859)

Pasek, Jan Chryzostom, *Pamiętniki: Całość* (Cracow: Polska Akademja Umiejętności, 1929)

Pasek, Jan Chryzostom, *Memoirs of the Polish Baroque: The Writings of Jan Chryzostom Pasek, a Squire of the Commonwealth of Poland and Lithuania* (Berkeley: University of California Press, 1976. Translation by Catherine S. Leach)

Pastorius, Joachim, *Bellum scythico-cosacicum, seu, De conjuratione Tartarorum Cosacorum et plebis Russicae contra regnum Poloniae ab invictissimo Poloniae et Sveciae rege Ioanne Casimirio* (Dantzig: Georg Förster, 1652)

Pufendorf, Samuel von, *Sieben Bücher von denen Thaten Carl Gustavs Königs in Schweden* (Nuremberg: Christoph Riegel, 1697). Translation of *De rebus a Carolo Gustavo, Sueciæ rege, gestis commentariorum libri septem* (Nuremberg: Christophor Riegel, 1696)

Roberts, Michael, *Sweden as a Great Power 1611–1697: Government; Society; Foreign Policy* (London: Edward Arnold, 1968). Translation of numerous Swedish primary sources including records of the Council of the Realm.

Schildknecht, Wendelin, *Harmonia in fortalitiis construendis, defendendis & oppugnandis* (Stettin: Johann Valentin Rheten, 1652)

Troupitzen, Lorentz von, *Kriegs Kunst: Nach Königlicher Schwedischer Manier eine Compagny zu richten, in Regiment, Zug- vnd Schlacht-Ordnung zu bringen, zum Ernst anzuführen, zu gebrauchen, vnd in esse würcklich, zu unterhalten* (Frankfurt-am-Main: Matthaeus Merian, 1633)

Voget, Peter, *Wahrhaftiger und gründlicherBericht von Belagerung und Eroberung der Haupt-Schanze in der Danziger Nährung* (Danzig: David Friedrich Rhete, 1661)

Zetterstéen, Karl Vilhelm, *Türkische, Tatarische und Persische Urkundenim Schwedischen Reichsarchiv* (Uppsala: Almqvist and Wiksell, 1945)

Later Studies

Alm, Josef, *Blanka vapen och skyddsvapen från och med 1500-talet till våra dagar* (Stockholm: Rediviva, 1975. First published 1932)

Alm, Josef, *Eldhandvapen 1: Från deras tidigaste förekomst till slaglåsets allmänna införande* (Stockholm: Rediviva, 1976. First published 1934)

Alm, Josef, *Arméns eldhandvapen förr och nu* (Stockholm: Kungl. Armémuseum, 1953)

Alm, Josef, 'Flottans handvapen'. *Sjöhistorisk Årsbok 1953–54* (Stockholm: Föreningen Sveriges Sjöfartsmuseum i Stockholm, 1954: pp.67–147)

Asker, Björn, *Karl X Gustav* (Lund: Historiska Media, 2010)

Asker, Björn, 'Svenska uniformsförteckningar 1655–1683'. *Meddelande XXXVII Armémuseum 1976–77* (Stockholm: Armémuseum, 1978: pp.77–100)

Askgaard, Finn, *Kampen om Östersjön på Carl X Gustafs tid: Ett bidrag till nordisk sjökrigshistoria* (Stockholm: Kungl. Militärhögskolan, *Carl X Gustaf-studier* 6, 1974)

Augusiewicz, Sławomir, *Prostki 1656* (Warsaw: Bellona, 2001)

Augusiewicz, Sławomir, 'Skład i liczebność stałej armii w Prusach Książęcych w latach 1656–1660'. *Komunikaty Mazursko-Warmińskie* 243 (1/2004) : pp.27–47

Babulin, Igor' B., *Smolenskiy pokhod i bitva pri Shepelevichakh 1654 goda* (Moscow: Russkiye Vityazi, 2018)

Babulin, Igor' B., *Bor'ba za Ukrainu i bitva pod Konotopom 1658–1659 gody* (Moscow: Russkiye Vityazi, 2015)

Babulin, Igor' B., *Kanevskaya bitva 16 iyulya 1662 goda: Zabytaya pobeda* (Moscow: Russkiye Vityazi, 2015)

Babulin, Igor' B., *Bitva pod Konotopom, 28 iyunya 1659 goda* (Moscow: Zeughaus, 2009)

Babulin, Igor' B., 'Sostav russkoy armii v Chudnovskom pokhode 1660', *Reytar* 28 (2006); available from *Oderint dum probent* blog (<www.rusmilhist.blogspot.com>)

Babulin, Igor' B., 'Vazhneyshiye pobedy Rossii v russko-pol'skoy voyne 1654–1667 gg.: Otvet retsenzentu'. *Istoriya voyennogo dela: issledovaniya i istochniki* 9 (2017) : pp.375–397

Babulin, Igor' B., 'Oborona Glukhova protiv pol'skoy armii korolya Yana Kazimira v 1664 g. *Slavyanskiy al'manakh* 2019: pp.213–36

Barkman, G. Bertil C:son, *Gustaf II Adolfs regementsorganisation vid det inhemska infanteriet: En studie över organisationens tillkomst och huvuddragen av dess utveckling mot bakgrunden av kontinental organisation* (Stockholm: Meddelanden från Generalstabens krigshistoriska avdelning, 1931)

Barkman, G. Bertil C:son; Sven Lundkvist; and Lars Tersmeden. *Kungl. Svea livgardes historia* 3:2: *1632 (1611)–1660* (Stockholm: Stiftelsen för Svea livgardes historia, 1966)

Bellander, Erik, *Dräkt och uniform: Den svenska arméns beklädnad från 1500-talets början fram till våra dagar* (Stockholm: Kungl. Armémuseum/P.A. Norstedt & Söner, 1973)

Belyayev, I.D., *O russkom voyske v tsarstvovaniye Mikhaila Feodorovicha i posle ego, do preobrazovaniy, sdelannykh Petrom Velikim: Istoricheskoye izsledovaniye* (Moscow: Universitetskaya tipografiya, 1846)

Bobiatyński, Konrad, *Od Smoleńska do Wilna: Wojna Rzeczypospolitej z Moskwą 1654–55* (Zabrze: Inforteditions, 2004)

Bobrov, Leonid A., Amet-han A. Sheykhumerov; and Alexey V. Salnikov, 'Stabbing Long-Shafted Pole Weapons of the Crimean Tatars and Nogais in 1440s–1650s: According to the Written Sources', *Bylyye Gody* 49: 3 (2018) : pp.884–914

Bobrov, Leonid. 'Kalmytskaya konnitsa v Russko-pol'skoy voyne 1654–1667 gg.: Vooruzheniye, taktika, voyennaya strategiya', *Zbroyeznav* 2014: pp.47–63

Borcz, Andrzej, *Przemyśl 1656-1657* (Warsaw: Bellona, 2006)

Carlbom, Johan Levin, *Om Karl X Gustafs polska Krig och öfvergången till det 2:dra Sundskriget* (Gothenburg: Centraltryckeriet/Oscar Ericson, 1905)

BIBLIOGRAPHY

Carlbom, Johan Levin, *Tre dagars slaget vid Warschau den 18, 19 och 20 juli 1656: Samt de föregående mindre fältslagen 1655 och 1656 – Ett tvåhundrafemtioårigt minne* (Stockholm: Varia, 1906)

Carlbom, Johan Levin, *Karl X Gustav: Från Weichseln till Bält 1657 – Tåget över Bält och freden i Roskilde 1658* (Stockholm: Fahlcrantz, 1910)

Cavallie, James, *De höga officerarna: Studier i den svenska militära hierarkien under 1600-talets senare del* (Stockholm: Militärhögskolan, 1981)

Cederström, Rudolf, *Svenska kungliga hufvudbanér samt fälttecken vid i Sverige, Finland och öfriga svenska provinser stående trupper förvarade i Kungl. Lifrustkammaren och Kungl. Artillerimuseum m. fl. in-och utländska Samlingar* (Stockholm: Meddelanden från Lifrustkammaren Nr. 2, 1900)

Chernov, A.V., *Vooruzhennye sily Russkogo gosudarstva v XV–XVII vv.: S obrazovaniya tsentralizovannogo gosudarstva do reform pri Petre I* (Moscow: Voyennoye Izdatel'stvo Ministerstva Oborony Soyuza SSR, 1954)

Cieślak, Edmund, 'Gdańsks militär-politiska och ekonomiska betydelse under polsk-svenska kriget 1655–1660'. Arne Stade and Jan Wimmer (eds), *Polens krig med Sverige 1655–1660: Krigshistoriska studier* (Stockholm: Kungl. Militärhögskolan, *Carl X Gustaf-studier* 5, 1973: pp.131–5)

Collins, Leslie J.D., 'The Military Organization and Tactics of the Crimean Tatars During the Sixteenth and Seventeenth Centuries', Vernon J. Parry and Malcolm Edward Yapp (eds), *War, Technology and Society in the Middle East* (London: Oxford University Press, 1975: pp.257–76)

Danielsson, Arne, 'Polska baner och gardesfanor i Statens Trofésamling'. *Meddelande 41–42 Armémuseum 1980–1982* (Stockholm: Armémuseum, 1984: pp.35–51)

Davies, Brian L., *Warfare, State and Society on the Black Sea Steppe, 1500–1774* (Abingdon, Oxon: Routledge, 2007)

Dzieszyński, Ryszard, *Kraków 1655–1657* (Warsaw: Bellona, 2019)

Englund, Peter, *Ofredsår: Om den svenska stormaktstiden och en man i dess mitt* (Stockholm: Atlantis, 1993)

Englund, Peter, *Den oövervinnerlige: Om den svenska stormaktstiden och en man i dess mitt* (Stockholm: Atlantis, 2000)

Ericson, Lars, *Krig och krigsmakt under svensk stormaktstid* (Lund: Historiska Media, 2004)

Fagerlund, Rainer. 'Kriget i östersjöprovinserna 1655–1661: Operationer och krigsansträngningar på en bikrigsskådeplats under Carl X Gustafs krig', Arne Stade (ed.), *Kriget på östfronten* (Stockholm: Militärhögskolan, *Carl X Gustaf-studier* 7:1, 1979)

Fredholm von Essen, Michael, *Muscovy's Soldiers: The Emergence of the Russian Army 1462–1689* (Warwick: Helion, 2018)

Fredholm von Essen, Michael, *Charles XI's War: The Scanian War between Sweden and Denmark, 1675–1679* (Warwick: Helion, 2019)

Fredholm von Essen, Michael, *The Lion from the North 1: The Swedish Army during the Thirty Years' War, 1618–1632* (Warwick: Helion, 2020)

Fredholm von Essen, Michael, *The Lion from the North 2: The Swedish Army during the Thirty Years War, 1632–1648* (Warwick: Helion, 2020)

Frost, Robert I., *The Northern Wars: War, State and Society in North-eastern Europe, 1558–1721* (Harlow, Essex: Pearson Education, 2000)

Frost, Robert I., *After the Deluge: Poland-Lithuania and the Second Northern War, 1655–1660* (Cambridge: Cambridge University Press, 2003)

Gadzyatskiy, S.S., 'Bor'ba russkikh lyudey Izhorskoy zemli v XVII veke protiv inozemnogo vladychestva', *Istoricheskiye zapiski* 16, 1945 (Moscow) : pp.14–57

Gadzyatskiy, S.S., 'Kareliya i Yuzhnoye Priladozh'ye v voyne 1656–58 gg.', *Istoricheskiye zapiski* 11, 1941 (Moscow): pp.236–81

Gawęda, Marcin, *Połonka-Basia 1660* (Warsaw: Bellona, 2005)

Gembarzewski, Bronisław, *Husarze: Ubiór. oporządzenie i uzbrojenie, 1500–1775* (Warsaw: Nakładem "Broni i Barwy", 1939)

Gembarzewski, Bronisław, *Żołnierzpolski* 1: *Ubiór, uzbrojenie i oporządzenie od wieku XI do roku 1960* (Warsaw: Wydawnictwo Ministerstwa Obrony Narodowej, 1960)

Glete, January, *Navies and Nations: Warships, Navies and State Building in Europe and America, 1500–1860* (Stockholm: Almqvist & Wiksell International, Acta Universitatis stockholmiensis (Stockholm Studies in History) 48:1, 2 vols, 1993)

Grushevskiy, Mikhail [Mykhailo Hrushevsky], *Illyustrirovannaya istoriya Ukrainy* (Kiev: MPP Levada, 1997). Authorised translation of Hrushevsky's work into Russian, based on the author's 1913 edition with additional materials of his published 1921 in Vienna.

Gullberg, Tom; and Mikko Huhtamies, *På vakt i öster*, Vol. 3, np: Schildts, 2004

Hahlweg, Werner, *Das Kriegswesen der Stadt Danzig* 1: *Die Grundzüge der Danziger Wehrverfassung 1454–1793* (Berlin: Junker und Dünnhaupt, 1937)

Hahlweg, Werner, *Das Kriegswesen der Stadt Danzig* 1: *Die Grundzüge der Danziger Wehrverfassung 1454–1793* (Osnabrück: Biblio-Verlag, 1982. Facsimile edition with additional materials)

Haratym, Andrzej, *Smoleńsk 1654* (Warsaw: Mówiąwieki, 2020)

Hedberg, Jonas (ed.), *Kungl. Artilleriet: Yngre vasatiden* (Stockholm: Militärhistoriska Förlaget, 1985)

Hedberg, Jonas, *Kungl. Artilleriet: Carl X Gustafs tid* (Stockholm: Militärhistoriska Förlaget, 1982 (1995 edition))

Hellie, Richard, *Enserfment and Military Change in Muscovy* (Chicago: University of Chicago Press, 1971)

Herbst, Stanisław, 'Tredagarsslaget vid Warszawa 1656', Arne Stade and Jan Wimmer (eds), *Polens krig med Sverige 1655–1660: Krigshistoriska studier* (Stockholm: Kungl. Militärhögskolan, *Carl X Gustaf-studier* 5, 1973: pp.255–93)

Holm, Torsten, *Översikt över Sveriges krig under 1600-talets senare hälft* (Stockholm: Militärlitteraturföreningen 148, 1927)

Hrushevsky, Mykhailo, *History of Ukraine-Rus'* (Edmonton and Toronto: Canadian Institute of Ukrainian Studies Press, 10 vols (in 12 books), 1997–2014). The final three volumes describe the cossack uprising.

İnalcık, Halil, 'The Khan and the Tribal Aristocracy: The Crimean Khanate under Sahib Giray I', *Harvard Ukrainian Studies* 3/4, Part 1: *Eucharisterion: Essays presented to Omeljan Pritsak on his Sixtieth Birthday by his Colleagues and Students (1979–1980)* : pp.445–466.

Jakobsson, Theodor, *Lantmilitär beväpning och beklädnad under äldre Vasatiden och Gustav II Adolfs tid.* Published both separately and as Suppl. Vol. 2 in Generalstaben, *Sverigeskrig 1611–1632* (Stockholm: Generalstaben, 1938)

Jany, Curt, *Geschichte der KöniglichPreußischenArmee bis zum Jahre 1807* (Berlin: Karl Siegismund, 4 vols, 1928–1933)

Keep, John L.H., *Soldiers of the Tsar: Army and Society in Russia, 1462–1874 (*Oxford: Clarendon, 1985)

Köhler, Gustav, *Geschichte der Festungen Danzig und Weichselmünde bis zum Jahre 1814 in Verbindungmit der Kriegsgeschichte der freien Stadt Danzig* 1: *Bis zum Jahre 1734* (Breslau: Wilhelm Koebner, 1893)

Kotljarchuk, Andrej, *In the Shadows of Poland and Russia: The Grand Duchy of Lithuania and Sweden in the European Crisis of the mid-17th Century* (Södertörn University College, dissertation, 2006)

Kujala, Antti, 'Förrädiska ryssar och förrymda finnar: Flyttningsrörelserna från Ingermanland och Kexholms län under ryska kriget 1656–1658 och provinsens kolonisation efter kriget', *Historisk Tidskrift för Finland* 97 (2012) : pp.469–98

Küpeli, Özer, 'Campaigns of the Crimean Tatars and Ottomans against Iran', *Zolotoordynskoye obozreniye (Golden Horde Review)* 2: 4 (2014) : pp.226–42

Kurbatov, Oleg Aleksandrovich, *Iz istorii voyennykh reform v Rossiivo 2-y polovine XVII veka: Reorganizatsiya konnitsy na materialakh Novgorodskogo razryada 1650-kh–1660-kh gg.* (Moscow, dissertation, 2002)

Kurbatov, Oleg Aleksandrovich, 'Russko-shvedskaya voyna 1656–58 gg.: Problemy kritiki voyenno-istoricheskikh istochnikov', *Rossiya i Shvetsiya v srednevekov'ye inovoye vremya: Arkhivnoye i muzeynoye naslediye* (Moscow, 2002) : pp.150–66. Available from Vladimir Velikanov's *Oderint dum probent* blog (<www.rusmilhist.blogspot.com>)

Kurbatov, Oleg Aleksandrovich, '"Litovskiy pokhod 7168 g.", kn. I.A. Khovanskogo i bitva pri Polonke 18 iyunya 1660 g.', *Slavyanovedeniye* 4, 2003: pp.225–40. Available from Vladimir Velikanov's *Oderint dum probent* blog (<www.rusmilhist.blogspot.com>).

Kurbatov, Oleg Aleksandrovich, 'Polk Antoniya Granovskogo v pokhode 1654 g.: O polozhenii inozemnykh spetsialistov inzhenernogo i artilleriyskogo dela v pusskom voyske', *Inozemtsy v Rossii v XV–XVII vekakh: Sbornik materialov konferentsiy 2002–2004 gg.* (Moscow, 2006: pp.316–35). Available from Vladimir Velikanov's *Oderint dum probent* blog (<www.rusmilhist.blogspot.com>)

Kurbatov, Oleg, Organizatsiya i boyevyye kachestva russkoy pekhoty "novogo stroya" nakanune i v khode russko-shvedskoy voyny 1656–58 gg.', *Arkhiv russkoy istorii: Sbornik Rossiyskogo gosudarstvennogo arkhiva drevnikh aktov* 8 (Moscow, 2007), pp.157–97. Available from Vladimir Velikanov's *Oderint dum probent* blog (<www.rusmilhist.blogspot.com>)

Kurbatov, Oleg Aleksandrovich, 'Rizhskiy pokhod tsarya Alekseya Mikhaylovicha 1656 g.: Problemyi perspektivy issledovaniya', Rudol'f Germanovich Pikhoya (ed.), *Problemy sotsial'noy i politicheskoy istorii Rossii: Sbornik nauchnykh statey* (Moscow: RAGS, 2009), pp.83–88. Available from Vladimir Velikanov's *Oderint dum probent* blog (<www.rusmilhist.blogspot.com>)

Laidre, Margus, *Schwedische Garnisonen in Est- und Livland 1654–1699* (Universität Tartu: Staatliches Historisches Zentralarchiv der Estnischen SSR /Tallinn: Valgus, 1990)

Landberg, Hans, *Carl X Gustaf inför polska kriget: Kungamakt och statsfinanser 1655* (Stockholm: Kungl. Militärhögskolan, *Carl X Gustaf-studier* 4, 1969)

Lange, Ulrich, *Karl X Gustavs bror Adolf Johan: Stormaktstidens enfant terrible* (Stockholm: Medström, 2019)

Lappalainen, Jussi T., 'Finland och Carl X Gustafs ryska krig: Försvaret av den östra rikshalvan 1656–1658', Arne Stade (ed.), *Kriget på östfronten* *Stockholm: Militärhögskolan, *Carl X Gustaf-studier* 7:2, 1979)

Larsson, Lars-Olof, *På marsch mot evigheten: Svensk stormaktstid i släkten Stålhammars spegel* (Stockholm: Prisma, 2007)

Łopatecki, Karol, '"Szwedzkie napoje" czyli rzecz o wysadzeniu zamku w Sandomierzu w świetle grafiki *Gesta ad Sandomiriam* Erika Dahlbergha', W. Walczak and K. Łopatecki (eds), *Stan badań nad wielokulturowym dziedzictwem dawnej Rzeczypospolitej* 7 (Białystok: Instytut Badań nad Dziedzictwem Kulturowym Europy, 2017: pp.151–179)

Malov, Aleksandr V., 'Gosudarevy vybornyye Moskovskiye polki soldatskogo stroya: Kratkiy ocherk istorii i organizatsii', *Zeughaus* 13 (2001) : pp.2–7.

Malov, Aleksandr V., 'Gosudarevy vybornyye Moskovskiye polki soldatskogo stroya: Komandiry vybornykh polkov', *Zeughaus* 14 (2001) : pp.2–7.

Malov, Aleksandr V., 'Znamena polkov novogo stroya', *Zeughaus* 15 (2001) : pp.6–10.

Malov, Aleksandr V., 'Znamena polkov novogo stroya: Simvolika kresta', *Zeughaus* 16 (2001) : pp.2–7.

Malov, Aleksandr V., 'Russkaya pekhota XVII veka: Gosudarevo zhalovan'ye-sluzhiloye plat'ye', *Zeughaus* 17 (2002) : pp.10–16.

Malov, Aleksandr V., '"Konnost', lyudnost' i oruzhnost" sluzhilogo 'goroda' pered Smolenskoy voynoy: Na materiale Velikikh Luk', *Zeughaus* 18 (2002) : pp.12–15.

Malov, Aleksandr V., 'Gosudarev vybornyy polk Aggeya Shepeleva: Pervoye soldatskoye sluzhiloye plat'ye'. *Zeughaus* 20 (2002) : pp.10–13.

Malov, Aleksandr V., 'Garnizon Borisoglebskoy kreposti: Gosudarevo sluzhiloye plat'ye, 1666', *Zeughaus* 21 (2003) : pp.3–7.

Malov, Aleksandr V., 'Gosudarevo sluzhiloye plat'ye Pervogo vybornogo polka 1661 g.', *Zeughaus* 22 (2006) : pp.6–9.

Malov, Aleksandr V., 'Dukhovnaya simvolika znamen moskovskikh konnykh soten XVII v. (po dokumental'nym istochnikam)', *Patriotizm: Dukhovnyy sterzhen' narodov Rossii* (Moscow: Ekonomicheskaya literatura, 2006: pp.45–70)

Malov, Aleksandr V., 'Gosudarevo sluzhiloye plat'ye Vtorogo vybornogo polka v kontse 1650-kh–nachale 1660-kh gg.', *Zeughaus* 24 (2007) : pp.5–7.

Malov, Aleksandr V., *Russko-pol'skayavoyna 1654–1667* (Moscow: Zeughaus, 2006)

Manz, Beatrice Forbes, 'The Clans of the Crimean Khanate, 1466–1532', *Harvard Ukrainian Studies* 2: 3 (1978) : pp.282–309

Munthe, Ludvig W:son, *Kongl. Fortifikationens historia 2: Fortifikationsstaten under Örnehufwudh och Wärnschiöldh, 1641–1674* (Stockholm: Norstedt & söner, 1906)

Nagielski, Mirosław, *Warszawa 1656* (Warsaw: Bellona, 2009)

Novosel'skiy, Aleksey Andreyevich, 'Ocherk voyennykh deystviy boyarina Vasiliya Petrovicha Sheremeteva v 1654 gody na Novgorodskom fronte', L.G. Dubinskaya (ed.), *Issledovaniya po istorii epokhi feodalizma* (Moscow: Nauka, 1994: pp.117–35)

Nowak, Tadeusz, 'Carl C Gustafs Kraków-operation 1655', Arne Stade and Jan Wimmer (eds). *Polens krig med Sverige 1655–1660: Krigshistoriska studier* (Stockholm: Kungl. Militärhögskolan, *Carl X Gustaf-studier* 5, 1973: pp.157–211)

Nowak, Tadeusz Marian, 'Det polska kronartilleriet före och under det polsk-svenska kriget 1655–1660', Arne Stade and Jan Wimmer (eds), *Polens krig med Sverige 1655–1660: Krigshistoriska studier* (Stockholm: Kungl. Militärhögskolan, *Carl X Gustaf-studier* 5, 1973: pp.103–129)

Ocakli, Sait, *The Relations of the Crimean Khanate with the Ukrainian Cossacks, the Polish-Lithuanian Commonwealth and Muscovy during the Reign of Khan Islam Giray III (1644–1654)* (University of Toronto, dissertation, 2017)

Opitz, Eckardt, *Österreich und Brandenburg im Schwedisch-Polnischen Krieg 1655–1660: Vorbereitung und Durchführung der Feldzügenach Dänemark und Pommern* (Boppard am Rhein: Harald Boldt, 1969)

Ostapchuk, Victor, 'Crimean Tatar Long-Range Campaigns: The View from Remmal Khoja's *History of Sahib Gerey Khan*', Brian J. Davies (ed.), *Warfare in Eastern Europe, 1500–1800* (Leiden: Brill, 2012: pp.147–71)

Ossoliński, Łukasz J.C., *Kampaniana Ukrainie 1660 roku* (University of Warsaw, dissertation, 1995, 2000)

Paradowski, Michał, *The Lithuanian Army 1653–1667* (Daniel Schorr's *Northern Wars* website (defunct), 2008)

Penskoy, V.V., 'Voyennyy potentsial krymskogo khanstva vo kontse XV–nachale XVII v.', *Vostok (Oriens)* 2, 2010: pp.56–66

Petri, Gustaf; with Erik Westman, *Kungl. Första livgrenadjärregementets historia* 2: *Östgöta regemente till fot 1619–1679* (Stockholm: P.A. Norstedt & Söner, 1928)

Podhorodecki, Leszek, '1659 års fälttåg i Kungliga (Polska) Preussen', Arne Stade and Jan Wimmer (eds), *Polens krig med Sverige 1655–1660: Krigshistoriska studier* (Stockholm: Kungl. Militärhögskolan, *Carl X Gustaf-studier* 5, 1973: pp.295–323)

Roessel, *Die erste Brandenburgische Flotte im Schwedisch-Polnischen Kriege 1658–1660 und ihr Kommandeur Obrist Johann von Hille* (Berlin: R. Eisenschmidt, 1903)

Romański, Romuald, *Cudnów 1660* (Warsaw: Bellona, 1996)

Sikora, Radosław, *Taktyka walki, uzbrojenie i wyposażenie husarii w latach 1576–1710* (Siedlce: Uniwersytet Przyrodniczo Humanistyczny, dissertation, 2010)

Sikorski, Janusz, *Jasna Góra 1655* (Warsaw: Bellona, 1994)

Skoworoda, Paweł, *Warka – Gniezno 1656* (Warsaw: Bellona, 2003)

Sowa, Marcin, 'Transylvanian Military in Mid-17th Century', Michał Paradowski and Rafał Szwelicki (eds), *The Deluge: Northern War 1655–1660* (Warsaw: Wargamer, 2015: pp.206–31)

Stade, Arne, *Erik Dahlbergh och Carl X Gustafs krigshistoria* (Stockholm: Kungl. Militärhögskolan, *Carl X Gustaf-studier* 3, 1967)

Stade, Arne (ed.), *Kriget på östfronten* (Stockholm: Militärhögskolan, *Carl X Gustaf-studier* 7, 1979)

Stade, Arne (ed.), *Carl X Gustafs armé* (Stockholm: Militärhögskolan, *Carl X Gustaf-studier* 8, 1979)

Stade, Arne; and Jan Wimmer (eds), *Polens krig med Sverige 1655–1660: Krigshistoriska studier* (Stockholm: Kungl. Militärhögskolan, *Carl X Gustaf-studier* 5, 1973). Published in Polish as Jan Wimmer (ed.), *Wojnapolsko-szwedzka, 1655–1660* (Warsaw: Wydawnictwo Ministerstwa Obrony Narodowej, 1973)

Stevens, Carol Belkin, *Soldiers on the Steppe: Army Reform and Social Change in Early Modern Russia* (DeKalb: Northern Illinois University Press, 1995)

Stevens, Carol Belkin, *Russia's Wars of Emergence 1460–1730* (London: Routledge, 2013)

Syroyechkovskiy, V.E., 'Mukhammed-Geraji ego vassaly', *Uchenyye zapiski Moskovskogo gosudarstvennogo universiteta* 61 (1940) : pp.3–71.

Teodorczyk, Jerzy, 'Czarnieckis vinterfälttåg januari-februari 1656: Slaget vid Gołąb', Arne Stade and Jan Wimmer (eds), *Polens krig med Sverige 1655–1660: Krigshistoriska studier* (Stockholm: Kungl. Militärhögskolan, *Carl X Gustaf-studier* 5, 1973: pp.213–54)

Tepkeyev, V.T., '"Ot nego, krymskogo khana, pravdy i postoyanstva net": Nabegi kalmytskikh otryadov na Krym vo vremya Russko-pol'skoy voyny 1654–1667 rr.', *Novyy istoricheskiy vestnik* 4 (38), 2013: pp.9–28

Tersmeden, Lars, 'Carl X Gustafs armé 1654–1657', Arne Stade (ed.), *Carl X Gustafs armé*. (Stockholm: Militärhögskolan, *Carl X Gustaf-studier* 8, 1979: pp.163–276)

Tersmeden, Lars, 'Carl X Gustafs armé: En konturteckning mot bakgrund av kriget mot Polen', Arne Stade (ed.), *Carl X Gustafs armé* (Stockholm: Militärhögskolan, *Carl X Gustaf-studier* 8, 1979: pp.9–48)

Tersmeden, Lars, "Manskapsersättningsproblematiken' vid det inhemska infanteriet under Carl X Gustafs krig', Arne Stade (ed.), *Carl X Gustafs armé* (Stockholm: Militärhögskolan, *Carl X Gustaf-studier* 8, 1979: pp.77–115)

Tersmeden, Lars, 'Värvningskampanjen 1655', Arne Stade (ed.), *Carl X Gustafs armé* (Stockholm: Militärhögskolan, *Carl X Gustaf-studier* 8, 1979: pp.117–62)

Tessin, Georg, *Die Deutschen Regimenter der Krone Schweden* 1: *Unter Karl X. Gustav (1654–1660)* (Cologne: Böhlau, 1965)

Ulfhielm, Hans; and Eric Granefelt (eds)., *Kungl. Artilleriet: Svenska Artilleriet i Östersjöprovinserna 1561–1721* (np: Militärhistoriska Förlaget, 2005)

Wennerholm, J. Bertil R., 'Svenska fantroféer i den ryska trofésamlingen', *Meddelande 41–42 Armémuseum 1980–1982* (Stockholm: Armémuseum, 1984: pp.53–97)

Wimmer, January, *Wojsko polskie w drugiej połowie XVII wieku* (Warsaw: Wojskowy Instytut Historyczny, Ministerstwo Obrony Narodowej, 1965)

Wimmer, January, 'Armé och finansväsen i Polen under kriget med Sverige 1655–1660', Arne Stade and Jan Wimmer (eds), *Polens krig med Sverige 1655–1660: Krigshistoriska studier* (Stockholm: Kungl. Militärhögskolan, *Carl X Gustaf-studier* 5, 1973: pp.41–101)

Wimmer, January, 'Polens krig med Sverige 1655–1660: Operativ översikt', Arne Stade and Jan Wimmer (eds), *Polens krig med Sverige 1655–1660: Krigshistoriska studier* (Stockholm: Kungl. Militärhögskolan, *Carl X Gustaf-studier* 5, 1973: pp.325–417)

Wrede, Alphons von; with Anton Semek. *Geschichte der K. und K. Wehrmacht: Die Regimenter, Corps, Branchen und Anstalten von 1618 bis Ende des XIX. Jahrhunderts* (Vienna: L.W. Seidel & Sohn, 5 vols, 1898–1905)

Zablocki, Wojciech, *Szable świata* (Warsaw: Bellona, 2011)

Other titles in the Century of the Soldier series

No 1 ***'Famous by my Sword':*** *The Army of Montrose and the Military Revolution*

No 2 ***Marlborough's Other Army:*** *The British Army and the Campaigns of the First Peninsula War, 1702–1712*

No 3 ***Cavalier Capital:*** *Oxford in the English Civil War 1642–1646*

No 4 ***Reconstructing the New Model Army:*** *Vol 1: Regimental Lists April 1645 to May 1649*

No 5 ***To Settle the Crown:*** *Waging Civil War in Shropshire, 1642-1648*

No 6 ***The First British Army, 1624-1628:*** *The Army of the Duke of Buckingham*

No 7 ***Better Begging Than Fighting:*** *The Royalist Army in Exile in the War against Cromwell 1656-1660*

No 8 ***Reconstructing the New Model Army:*** *Vol 2: Regimental Lists April 1649 to May 1663*

No 9 ***The Battle of Montgomery 1644:*** *The English Civil War in the Welsh Borderlands*

No 10 ***The Arte Militaire:*** *The Application of 17th Century Military Manuals to Conflict Archaeology*

No 11 ***No Armour But Courage:*** *Colonel Sir George Lisle, 1615-1648*

No 12 ***Cromwell's Buffoon:*** *The Life and Career of the Regicide, Thomas Pride*

No 14 ***Hey for Old Robin!*** *The Campaigns and Armies of the Earl of Essex During the First Civil War, 1642-44*

No 15 ***The Bavarian Army during the Thirty Years War***

No 16 ***The Army of James II, 1685-1688:*** *The Birth of the British Army*

No 17 ***Civil War London:*** *A Military History of London under Charles I and Oliver Cromwell*

No 18 ***The Other Norfolk Admirals:*** *Myngs, Narbrough and Shovell*

No 19 ***A New Way of Fighting:*** *Professionalism in the English Civil War*

No 20 ***Crucible of the Jacobite '15:*** *The Battle of Sheriffmuir 1715*

No 21 ***'A Rabble of Gentility':*** *The Royalist Northern Horse, 1644-45*

No 22 ***Peter the Great Humbled:*** *The Russo-Ottoman War of 1711*

No 23 ***The Russian Army In The Great Northern War 1700-21:*** *Organisation, Matériel, Training, Combat Experience and Uniforms*

No 24 ***The Last Army:*** *The Battle of Stow-on-the-Wold and the End of the Civil War in the Welsh Marches, 1646*

No 25 ***The Battle of the White Mountain 1620 and the Bohemian Revolt, 1618-22***

No 26 ***The Swedish Army in the Great Northern War 1700-21:*** *Organisation, Equipment, Campaigns and Uniforms*

No 27 ***St. Ruth's Fatal Gamble:*** *The Battle of Aughrim 1691 and the Fall Of Jacobite Ireland*

No 28 ***Muscovy's Soldiers:*** *The Emergence of the Russian Army 1462-1689*

No 29 ***Home and Away:*** *The British Experience of War 1618–1721*

No 30 ***From Solebay to the Texel:*** *The Third Anglo-Dutch War, 1672-1674*

No 31 ***The Battle of Killiecrankie:*** *The First Jacobite Campaign, 1689-1691*

No 32 ***The Most Heavy Stroke:*** *The Battle of Roundway Down 1643*

No 33 ***The Cretan War (1645-1671):*** *The Venetian-Ottoman Struggle in the Mediterranean*

No 34 ***Peter the Great's Revenge:*** *The Russian Siege of Narva in 1704*

No 35 ***The Battle Of Glenshiel:*** *The Jacobite Rising in 1719*

No 36 ***Armies And Enemies Of Louis XIV:*** *Volume 1 - Western Europe 1688-1714: France, Britain, Holland*

No 37 ***William III's Italian Ally:*** *Piedmont and the War of the League of Augsburg 1683-1697*

No 38 ***Wars and Soldiers in the Early Reign of Louis XIV:*** *Volume 1 - The Army of the United Provinces of the Netherlands, 1660-1687*

No 39 ***In The Emperor's Service:*** *Wallenstein's Army, 1625-1634*

No 40 ***Charles XI's War:*** *The Scanian War Between Sweden and Denmark, 1675-1679*

No 41 ***The Armies and Wars of The Sun King 1643-1715:*** *Volume 1: The Guard of Louis XIV*

No 42 ***The Armies Of Philip IV Of Spain 1621-1665:*** *The Fight For European Supremacy*

No 43 ***Marlborough's Other Army:*** *The British Army and the Campaigns of the First Peninsular War, 1702–1712*

No 44 ***The Last Spanish Armada:*** *Britain And The War Of The Quadruple Alliance, 1718-1720*

No 45 ***Essential Agony:*** *The Battle of Dunbar 1650*

No 46 ***The Campaigns of Sir William Waller***

No 47 ***Wars and Soldiers in the Early Reign of Louis XIV:*** *Volume 2 - The Imperial Army, 1660-1689*

No 48 ***The Saxon Mars and His Force:*** *The Saxon Army During The Reign Of John George III 1680–1691*

No 49 ***The King's Irish:*** *The Royalist Anglo-Irish Foot of the English Civil War*

No 50 ***The Armies and Wars of the Sun King 1643-1715:*** *Volume 2: The Infantry of Louis XIV*

No 51 ***More Like Lions Than Men:*** *Sir William Brereton and the Cheshire Army of Parliament, 1642-46*

No 52 ***I Am Minded to Rise:*** *The Clothing, Weapons and Accoutrements of the Jacobites from 1689 to 1719*

No 53 ***The Perfection of Military Discipline:*** *The Plug Bayonet and the English Army 1660-1705*

No 54 ***The Lion From the North:*** *The Swedish Army During the Thirty Years War: Volume 1, 1618-1632*

No 55 ***Wars and Soldiers in the Early Reign of Louis XIV:*** *Volume 3 - The Armies of the Ottoman Empire 1645-1718*

No 56 ***St. Ruth's Fatal Gamble:*** *The Battle of Aughrim 1691 and the Fall Of Jacobite Ireland*

No 57 ***Fighting for Liberty:*** *Argyll & Monmouth's Military Campaigns against the Government of King James, 1685*

No 58 ***The Armies and Wars of the Sun King 1643-1715:*** *Volume 3: The Cavalry of Louis XIV*

No 59 ***The Lion From the North:*** *The Swedish Army During the Thirty Years War: Volume 2, 1632-1648*

No 60 ***By Defeating My Enemies:*** *Charles XII of Sweden and the Great Northern War 1682-1721*

No 61 ***Despite Destruction, Misery and Privations..:*** *The Polish Army in Prussia during the war against Sweden 1626-1629*

No 62 ***The Armies of Sir Ralph Hopton:*** *The Royalist Armies of the West 1642-46*

No 63 ***Italy, Piedmont, and the War of the Spanish Succession 1701-1712***

No 64 ***'Cannon played from the great fort':*** *Sieges in the Severn Valley during the English Civil War 1642-1646*

No 65 ***Carl Gustav Armfelt*** *and the Struggle for Finland During the Great Northern War*

No 66 ***In the Midst of the Kingdom:*** *The Royalist War Effort in the North Midlands 1642-1646*

No 67 ***The Anglo-Spanish War 1655-1660:*** *Volume 1: The War in the West Indies*

No 68 ***For a Parliament Freely Chosen:*** *The Rebellion of Sir George Booth, 1659*

No 69 ***The Bavarian Army During the Thirty Years War 1618-1648:*** *The Backbone of the Catholic League (revised second edition)*

No 70 ***The Armies and Wars of the Sun King 1643-1715:*** *Volume 4: The War of the Spanish Succession, Artillery, Engineers and Militias*

No 71 ***No Armour But Courage:*** *Colonel Sir George Lisle, 1615-1648 (Paperback reprint)*

No 72 ***The New Knights:*** *The Development of Cavalry in Western Europe, 1562-1700*

No 73 ***Cavalier Capital:*** *Oxford in the English Civil War 1642–1646 (Paperback reprint)*

No 74 ***The Anglo-Spanish War 1655-1660:*** *Volume 2: War in Jamaica*

No 75 ***The Perfect Militia:*** *The Stuart Trained Bands of England and Wales 1603-1642*

No 76 ***Wars and Soldiers in the Early Reign of Louis XIV:*** *Volume 4 - The Armies of Spain 1659-1688*

No 77 ***The Battle of Nördlingen 1634:*** *The Bloody Fight Between Tercios and Brigades*

No 78 ***Wars and Soldiers in the Early Reign of Louis XIV:*** *Volume 5 - The Portuguese Army 1659-1690*

No 79 ***We Came We Saw God Conquered:*** *The Polish-Lithuanian Commonwealth's military effort in the relief of Vienna, 1683*

No 80 ***Charles X's Wars:*** *Volume 1 - Armies of the Swedish Deluge, 1655-1660*

Submissions **The publishers welcome submissions for this series. Please contact series editor Charles Singleton by email: charlessingleton@helion.co.uk or by post: Helion & Company Limited, Unit 8 Amherst Business Centre, Budbrooke Road, Warwick, CV34 5WE.**

HELION & COMPANY

This book describes and analyses the 'Swedish Deluge' (potop szwedski), the devastating 1655–1660 wars fought between Sweden, the Polish-Lithuanian Commonwealth, Brandenburg-Prussia, Muscovite Russia, Transylvania, Cossack Ukraine, the Tatar Khanate of Crimea, and the Holy Roman Empire during the reign of Swedish King Charles X Gustavus, an experienced former general from the Thirty Years' War.

By invading the Polish-Lithuanian Commonwealth, King Charles saw an opportunity to put an end to the Polish King's claim to the Swedish throne and to gain additional territories which would enable him to control the Baltic Sea maritime trade. The book focuses on the Swedish–Commonwealth war, which provoked the political and military collapse of the Commonwealth. However, since this conflict cannot be disentangled from the simultaneous wars between the Commonwealth and Muscovy, from 1654 to 1667, and between Sweden and Muscovy, from 1656 to 1661, they are described as well. Meanwhile, the Ukrainian cossacks fought for freedom from what they perceived as the oppression of the Commonwealth.

Michael Fredholm von Essen presents new research on a war previously seldom described in English. Moreover, the book explains the continued development of the Swedish Army after the Thirty Years' War. It also provides full details on the dissimilar military systems of the Polish-Lithuanian Commonwealth, Brandenburg-Prussia, Muscovite Russia, Cossack Ukraine, Transylvania, the Crimean Tatar Khanate, and the Imperial expeditionary forces engaged in the Swedish Deluge. This first volume examines the armies that fought in the east. Volume Two covers the wars in the east. Volume Three examines the Danish Wars and the armies that fought in them.

Century of the Soldier
1618-1721

HELION & COMPANY
www.helion.co.uk
helionbooks

ISBN 978-1-914059-75-9